NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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JANUARY.

"The wintry West extends his blast,
And hail and rain do blow;
Or the stormy North sends driving forth
The blinding sleet and snow.
While tumbling brown, the burn comes down,
And roars from bank to brae;
And bird and beast in covert rest
And pass the heartless day." BURNS.

THE NEW YEAR comes again to us laden with blessings and duties. We have passed once more the annual cycle, and another chapter of life is written and stamped with its final seal. How important it is, at this time, that we pause and review the past. It speaks to us from its tomb with a voice both of warning and encouragement, and points, with its dead finger, the pathway through the fields of the future which we, as rational beings, should pursue. What lessons can be more important or impressive than those of "dead Time?" More eloquent than the preachings of Melancthon or a Luther, are the prelections and sermons of the vanished months which died like saintly (but mistaken) nuns, breathing out their balmy life in the stillness and quiet of cloistral solitude, with the rosary, and badge of salvation upon their breasts.

Although we cannot now, as in the bloom and flushing spring and summer, or amid the purple and golden glories of autumn, wander "o'er bank and brae," or on the "sloping hillsides," drinking in the inspiration of the poet, and dreaming dreams of rare enchantment and beauty, yet we are not destitute of ample means of enjoyment within the circle of home engrossments; and while the skies are veiled in "thick clouds," and the loud winds howling their pæans through the dismantled trees, we can draw around us the great and good of every clime, and hold familiar intercourse with superior minds upon the various topics which concern us, and the interests of the little world of social life by which we are surrounded, and of which we are the protectors and the heads.

It is one of the rarest immunities of our social system, that, amid the desolation of this season of the common year, we are at liberty to enjoy the fruits of our labors unannoyed by the cares and perplexities which abate the happiness of the man of more worldly and sordid aims. Peace reigns within the farmer's domicil, and contentment—the greatest blessing that the human mind can enjoy—crowns him with perennial delight, while the merchant, whose canvas whitens every sea, is plunged into distress by perils of war and the waters, or by every change in the markets not favorable to his wishes, and made miserable by every mutation in business and the price of stocks. With the close of the vegetative year, he can close his doors upon care, and isolate himself effectually from its annoyances. Surrounded by his family and a few select friends, he can devote his mind to study or mental recreation, with the assurance that in the acquisition of useful knowledge, he is not only gratifying an imperative and heaven-instituted want of his nature, but actually contributing to the happiness and well-being of the world around him, as contemplated in the results which his acquisitions are calculated to promote.

Wisely has the poet counselled:

"Sow, though in days of gloom, the seeds
Of manful toil and generous deeds,
Of stern self-sacrifice, that heeds
Little the world's behest;
Cast out the lying thought that pleads
'Enough, now take thy rest.'

* * * * * *

"That which was sown in the wintry air
Shall blossom and ripen when skies are fair,
Though thine should be many an anxious care

Ere the harvest is gathered in—
Be stout to toil, and steady to bear—
The heart that is true shall win."

It is by the hearthstone of the farmer's home that the education of the young mind that is to be trained to the pursuit of agriculture, and its kindred branches, should be commenced. Better there than elsewhere can be laid the foundation of future usefulness and success in ife; for there the youthful student will be surrounded by the influences which serve to attach his personal interests and sympathies to the pursuit, and secure, from surrounding objects, that healthy stimulus to exertion which is always so essential to success. Here he should read the writings of those who have labored long, and, in too many cases, thanklessly, for the benefit of the husbandman, and whose works are the richest legacy, if properly appreciated, that they could have bequeathed to man. What would now be regarded as a fair equivalent for the volumes of VON THAER, or, in our own country, of Prof. JOHNSTON, or the eminently practical volume of Judge BUEL, on common husbandry, or of Judge FRENCH, on drainage, by those who properly estimate the value of such works in assisting the development of mind? And JUSTUS LIEBIG has given to us, in his published works, a legacy of wisdom for which empires were, in truth, but a poor exchange!

Whoever can teach us the art of causing two blades of grass to grow, *profitably*, where but one grew before—who can instruct us in what way we can most easily and economically redeem the putrid swamp, tenanted by loathsome reptiles, and noxious plants, and cause it to teem with nutritious herbage, is a benefactor, whose achievements entitle him to the highest praise, and whose name deserves to be kept in remembrance by those for whom he has "plied the task," and reaped the sheaves whose golden glories gladden the earth and strengthen the spirits of their fellow-men on the battle-field of life.

The good seed they scatter will spring up

——"in spite of cloud and blast,
And sullen rain descending fast,
And snow-wreaths thickly o'er it cast,
And thunderous, darkening skies;
The very tempest roaring past,
Strengthens it as it lies."

So, let us begin this NEW YEAR with honest intentions, with cheerful hopes, and with determined energy, notwithstanding that wicked men are spreading death and ruin over the land, and ever remember that if we

"Be stout to toil, and steady to bear,
The heart that is true shall win."

It costs a great deal more to be miserable than to be happy.

FORCE---MEN AND HORSES COMPARED.

Desagulier's Experimental Philosophy gives much information on the subject. The horse draws with the greatest advantage, when the line of direction is level with his breast; in such a situation he is able to draw 200 lbs. eight hours a day, walking about two miles and a half an hour. This, of course, does not relate to the weight of the wagon, or load, but to the amount of force he exerts upon the shafts. If the same horse be made to draw 240 lbs., he can work but six hours, and cannot go so fast. On a carriage, where friction alone is to be overcome, a middling horse will draw 1000 lbs. If a weight be suspended in a well by a rope, passing over a pulley, a horse will lift, when attached to this rope, but about 200 lbs. His feet cannot hold on to the ground with a force any thing equal to his own weight operating against his line of travel.

Five men are equal in strength to one horse, and can with as much ease pull the horizontal beam of a mill occupying a circle of nineteen feet, while three men will do it in a walk forty feet wide.

A horse employs much less force when required to draw up hill; if the hill be steep, three men will do more than the horse, each man climbing up faster with a burden of 100 lbs. weight, than a horse that is loaded with 300 lbs. This is due, of course, to the position of the parts of the body being better adapted to climbing than those of the horse. In a horizontal direction the quadruped has the advantage over the biped. Thus a man weighing 140 lbs., and drawing a body along by means of a rope coming over his shoulders, cannot draw above 27 lbs., or exert above one-seventh part of the force of a horse employed for the same purpose.

The very best and most effectual force in a man, is that of rowing, wherein he not only acts with more muscles at once for overcoming the resistance, than in any other position; but as he pulls backward, the weight of his body assists as a lever for continuous labor.

The horse is enabled to do more work on a surface of variable figure, than in a very level country. Horses do not wear well if all the roads they draw upon be on an inclined plane or a fixed gradation. Every change of figure in the surface, brings into action another set of muscles, so that all the muscles of the horse are in turn called upon to act on the varied surfaces, whereas those of a continued figure appeal to one set of muscles alone.—*Working Farmer.*

DRY FOOD FOR HOGS.—A correspondent of the *Country Gentleman* says: Many hogs are kept comparatively poor by the high dilution of their food. They take in so much water that there is not room for a good supply of nutriment. Hence the reason that those farmers who carefully feed undiluted sour milk to their hogs, have so much finer animals than those who give them slops. The hog has not room for much water; and if food which contains much is fed to him, it makes him big-bellied, but poor." Hogs, as well as all other animals, should be allowed all the water they will drink, but it should not be mixed with their food in excessive quantity.

For the New England Farmer.

HONG KONG, CHINA.

My last letter I was obliged to bring to an abrupt close in order to complete arrangements for leaving the next day for Canton.

On the morning of Saturday last, accompanied by several friends, I embarked on the steamer "White Cloud," then ready to start for Canton river. The morning was delightful, and the pure sea air proved wonderfully invigorating after the exhausting process of a week's residence in Hong Kong. I went early on deck to take a look at the scenery on shore, but it was quite two hours before we had fairly entered the river, and until then I saw very little to interest me. High, barren hills obscured all inland objects, and with the exception of here and there a fisherman's hut on the narrow beach and an occasional junk sailing by, with its huge fanlike sails extended to the light breeze, few signs of life were visible. I own I was disappointed; the tropical vegetation which I had led my imagination to expect did not seem to be here; neither were there many evidences of that industrious agricultural skill, which I had supposed peculiar to the Chinese, to be seen; but the rapid progress made by our fast boat soon opened to our view a region of country highly cultivated, and tropical in its luxuriance.

As we glided along, the captain pointed out the famous Bogue Forts, but only enough remained of them to exhibit the unskilfulness of the Chinese. The position for defence was remarkably well chosen, and needed but the aid of good engineering to make it impregnable.

Large paddy (or rice) fields stretched away from the water, and along the dikes built to prevent an overflow of the land, were planted rows of the Lychee tree, whose leaves of greenish hue in contrast with the lighter shades of the blossoms, were objects of much beauty. From this point to Whampoa, the country presented a panoramic view of surpassing novelty. There our stay was short. Small boats, or sampans, flocked around the steamer, and literally covered the river surface. Girls managed them with consummate skill, and seemed to enjoy the rocking motion of their diminutive craft as our steamer glided by.

The hills back of the town were terraced to their summits, and had the appearance of grave-yards. A pagoda of some seven or eight stories was here a conspicuous object. Beyond Whampoa, further up, the river was swarming with boats, seemingly countless in number, and of every size and shape. A number of government junks, with immense goggle-like eyes staring from their bows, were moored in the stream.

Canton was reached early in the afternoon, and while waiting an opportunity to go on shore, we had ample time to view the city as it appears from the river. Scarcely a trace is now to be seen of the splendid hongs, or mercantile houses, which formerly stood outside of the walls and were occupied as residences and places of business by foreign merchants.

The hong boat, as it is called, now came along side, and the passengers from the "White Cloud" were quickly landed. I was hospitably received at the great commercial establishment of Messrs. ——. A spacious room was kindly placed at my disposal, and having brought along with me the necessary appendage of a China boy, I found no difficulty in making myself comfortable.

The sky was still overcast. It had rained since noon and I made up my mind to remain within doors, especially as the view from the verandah gave me an excellent opportunity to watch the movements of the innumerable sampans, flower-boats and various other craft, which stretched away as far as the eye could reach. At the stern of most of these was a huge scull or sweep, invariably managed by females, while the less industrious males worked a light stroke oar at the side or stem. Little children toddled about on the decks, with gourds strapped to their backs,—some were tied with strings—to protect them from harm in case of being lost overboard. What with the hoarse, guttural cries of peddlers, floating leisurely by, and the noise and din on shore from beatings of gongs, chin-chinning, joss, and the explosions of fire crackers, confusion seemed to reign with undisputed sway.

The next day, Sunday, we did not attend church for the very good reason that there was none to attend. It was apparent that the blessings of a Christian Sabbath were unknown here, and that the native population still remain immersed in the darkness of idolatry. In the afternoon, accompanied by a friend and resident of Canton, I crossed the river to visit the Shahmeen site, a large piece of land ceded, at the termination of the late war, to the English and French. It is separated from the adjoining shore by a wide canal, extending around to the rear, the front facing the river. A substantial granite wall, reaching from the water by numerous flights of steps, is built around the whole. But few buildings as yet have been erected. This spot is more favorably situated than the old site; it is a delta in the river, nearly opposite the Macao passage, and is regarded as quite healthy.

On our return, we wandered out among the shops, making, however, no purchases. The shopmen were very civil, invariably saluting us with "chin chin," and on our announcement that we were merely "makee look see," replied, "can do," and politely displayed their wares.

Monday morning, taking open chairs with us, we crossed the river in the hong boat to visit the city. Procuring four coolies to each of our chairs, we set out, immediately after landing, under the guidance of a boy, to make our way through the narrow and crowded streets. Our sedan bearers kept up a sharp, incessant cry to warn foot passengers to make way. Above our heads, depending from every shop, were numerous long signs inscribed in Chinese characters. The shops were so small and our coolies walked so rapidly, that we could catch but a slight glimpse of their contents. Some shoe stores that we passed had their goods displayed and arranged precisely as at home. As we were being whirled along we met a mandarin in a chair, and the street being too narrow to allow us to pass him, our coolies backed us into an opposite building, thus affording the dignitary an opportunity to proceed.

We had started with the intention of visiting the temples or joss houses. We were first conducted to the "Temple of Five Hundred Joss." This temple was entered through an outer building or lodge, in which were two colossal images, one representing Peace and the other War, both

painted in grotesque and fantastic hues. Thence, passing through a yard, we were admitted to the main edifice. A priest, with shaven head, undertook our guidance through the intricate passages, and soon we were in the presence of five hundred idols.

Throughout the room, these idols were arranged upon long platforms, in sitting postures. They were all gilded, and although excessively Chinese in appearance, were not expressionless. In front of each idol was a vase of artificial flowers and a leaden vessel of peculiar shape, to receive the ashes of the joss stick offered as a sacrifice. The building containing the idols was exceedingly plain both in its interior and exterior. Giving our attendant a cumshaw, we proceeded on our way, visiting several buildings similar in character to the one we had just left. In one of them we were shown a fine model of a pagoda, constructed of porcelain, and, at least, thirty feet in height.

Still following our guide, and having mounted a great number of steps, we found ourselves at the summit of a high hill, from which we obtained, for the first time, an excellent view of the city and the White Cloud mountains in the distance. The buildings in the city were nearly equal in height, and, with the exception of several pagodas towering above the common level, few objects met our gaze, and we saw little else save a vast plain of roofs extending on either side to an immense distance. A small temple, containing several gilded images, was the only structure on the hill. On my way down, I had the curiosity to count the steps that we had passed over, and found the number to be three hundred and seventy-five.

Desirous to be in time for *tiffin*, we commenced our return, the coolies walking at a rapid pace. On passing through the gates of the city to the suburbs, I had an opportunity to examine the walls. They seemed to be made of bricks nearly thirty feet in height, and half as thick at the base. It was here that I was repeatedly reminded of the fierce contests between the Cantonese and the English a few years since. Traces of fire—dilapidated and ruined houses lining whole streets—vacant spots in the midst of once thickly-populated districts—gave unmistakable evidences of the terrible bombardment to which the city was subjected. Having returned to our quarters, we discharged our coolies, paying them for a four hours' tramp a quarter each, with which they were entirely satisfied.

The next day I was shown the establishment of Hipqua, the most famous manufactory of lacquered ware in Canton. The buildings in which this beautiful work is done were in a very filthy condition; the rooms all small, and crowded with workmen to such an extent as scarcely to admit of easy elbow-room. The first process I was allowed to witness consisted of the coating of the numerous articles with a material resembling flax, designed, as I was informed, to give elasticity to the subsequent coatings of lacquer, the number of which being less or more according to the intended quality of the work.

After passing through a drying process, the work is first varnished, then polished, and afterwards submitted to artists for embellishment This process is the most curious of all, and notwithstanding many of the designs are grotesque. such is the skill with which they are executed that many of them are really beautiful. The patterns are first traced with a pencil of chalk or marked out by rubbing a white powder over a paper stencil. They are then painted in vermillion, and gold dust is thrown over to bring out the design.

In the afternoon I visited the Honam Temple. This I found to be more extensive than any similar temple I had seen. Before the hideous idols, women were worshipping, bowing and kissing the ground, rising frequently to light fresh joss sticks which they kept burning in a leaden vase before their god. Great numbers of priests were domiciled here, one of whom conducted me into the kitchen and dining hall. It being dinner hour, they were seated at long benches, devouring their "chow chow," placed before them in small bowls. The cooking was done in large iron boilers.

Here too I saw the famous *sacred hogs*. They were confined in a stone pen, kept quite cleanly, and had the appearance of great age. Some of them were very large, their bellies actually dragging upon the ground. They are never slaughtered, and of course, die natural deaths. As porcine specimens, they come far short of what I had been taught to regard as at all desirable; having large, bony heads, coarse frames and skins thickly coated with long bristles.

Extensive gardens were connected with this institution laid out and cultivated in beautiful taste and order. Dwarf pear and other fruit trees similar to those found at home, were to be seen here, and it was astonishing with what skill and ingenuity they trimmed and trained trees and plants into imitations of pagodas, boats and even animals. Flowers were interspersed throughout the grounds, and the whole had a most pleasing effect.

In the afternoon I accompanied a party of gentlemen to the celebrated porcelain manufactory of Ushing. On our passage through the streets the inhabitants flocked to the doors to see us. Many of the younger married women had their cheeks and lips painted a *violent* carmine, giving them the appearance of wax dolls.

We found the factory divided into small compartments similar to those seen at Hipqua the day previous. The ware of the establishment is made and baked in the country, and brought here to be painted and otherwise decorated. The colors when first put on are destitute of brilliancy, but after having undergone the process of another baking, are very beautiful.

In the evening we made a tour among the flower boats. As these are institutions peculiar to China and the Chinese, it may be well to state that when a rich man or successful merchant desires to give an entertainment to his friends, he hires one of these boats for an evening. Here, conveniences for smoking opium are furnished. Young girls are in attendance, and music and mirth resound. The boats are highly ornamented, and lighted by numerous glass chandeliers, chiefly of European manufacture.

An entertainment was going on in one of the boats we visited. Around a small table, on which was spread a variety of preserved fruits, were seated a number of beautiful girls, their heads and hair bedecked with fragrant flowers. Their cheeks and lips were painted, and they seemed to be occupied, some in eating melon seeds, others in self-admiration before small mirrors. Several

musicians strummed on instruments resembling banjoes, and a "sing song girl" screeched in loud falsettoes, making together the most diabolical noises I ever heard. It is hardly necessary to add that these boats or places of amusement form the *demi-monde* of China.

Any ordinary description of a Chinese city or of Chinese life will convey to the reader but an imperfect idea of either; but I am told that by seeing one city, a very accurate impression may be formed of every other. F. E. F.

For the New England Farmer.

AGRICULTURE IN COMMON SCHOOLS.

MR. BROWN:—For more than twenty years we have been the advocate of introducing agriculture as one of the branches to be taught in common schools. Our reasons for assuming this position are, that all agricultural operations are performed on principles of science, whether farmers will admit the fact or not, and are successful just in proportion as these principles are carried out. Science is truth, nothing more or less, and the better truth is understood, the more easily we can follow out its dictates.

It has been a pleasure to us, to read the discussions that have been going on in your paper for a few months past, on this subject. They have shown that the minds of individuals, at least, are waking up on this subject, and this waking up we consider a bright herald of a noble future action. We are glad that those who see lions in the way, whether those lions are real or imaginary, have the generosity to show the danger.

It was said, by one of the ancients, when asked what were the most proper things for boys to learn, 'Those things they are to practice when they become men," and this saying has been held in so high estimation, that it has been regarded as a proverb ever since. Admitting it to be true, agriculture and its kindred sciences are among the studies which have a demand on the attention of young farmers. How are a majority of them to obtain this knowledge, if they do not acquire its rudiments in common schools?

In the discussions alluded to, in the commencement of this article, Mr. Goldsbury very honestly, we have no doubt, brings three reasons, which to his mind are conclusive, to show that it cannot be introduced without doing more harm than good; we differ from him in opinion, and give our reasons for doing so. His objections are:

"*First*, It would injure the schools by diverting the attention of the scholars from their other necessary studies." Here we should have been obliged to Mr. G. if he had defined what those other studies are, for, as the case now stands, he has taken a wide field, bearing a variety of crops. Some hold one study important to education, while others differ in opinions, and give preference each to his favorite. We once knew a teacher who considered Latin and Greek the two essential studies to be pursued to secure all needful knowledge. And we have heard a *learned* professor of geology remark, that if he were to commence his educational course again, he would pass over those very studies; that he could acquire enough knowledge of them for his purpose, without spending months of toil to obtain it. Which was right, or whether either, we don't decide, nor do we know what Mr. Goldsbury's "necessary studies" may turn out to be. He has left the game in the dark, and invites "More Anon" to shoot at it. Indeed, he seems to claim victory until "More Anon" does so. We don't know as we blame "More Anon," if he does not waste his ammunition until he sees something to shoot at.

For ourselves, we are not in search of game; Mr. Goldsbury has set forth his opinion, in his own way. We differ from him, and will give our reasons, which if we are wrong, it will be our pleasure to have Mr. G. correct.

What are the necessary studies of the common school? Those of first and greatest importance, (as we view the subject,) are reading, spelling, writing, arithmetic, and a knowledge of our language. These, the fathers of New England held to be important, and each successive generation of their sons has added new seals to their testimony, and it is with regret, that in our day we have seen them gradually growing out of the repute in which they once were held. Our observation is limited, we admit, but we question whether New England can furnish a larger number of good readers, correct spellers and finished penmen now, than it did twenty-five, or even fifty years ago! But we hold these to be the necessary studies, the corner-stones on which the progress of the scholar in all other studies rests. What next? Geography. An excellent study, and one that can be made very useful, even in agriculture, but not as necessary as many topics that come directly in the sphere of the practical operations of the farm. It is of small consequence when the rivers of Siberia freeze, compared with the adaptation of crops to our soil and climate. Algebra has become so popular a study in schools, that scholars almost leave their abs to go into it. Yet of what use is it in practical life? Where is the individual who adopts it in preference to common arithmetic in business operations? How many leave it in the school-room where they found it, or take it away only to forget it. Some of our common schools glory in their Latin classes; we have heard children going over with their *hic, hoc*, &c., who *did not* read plain English so as to make it intelligible, much less effective, across the school-room. Of what possible use can the smattering of Latin, so acquired, be? But, for argument's sake, we will give these studies, and any others Mr. Goldsbury may claim as necessary, a place in the school-room, and we have one nook left which agriculture may occupy as a study in the school, without interfering with these necessary studies, (if he holds them as such,) to wit, what better or more interesting reading books can be found than the "Manual of Agriculture" by Mr. Flint, or the series of "Family Readers" by Marcius Willson? If he can give us no wider berth, we hope he will allow us to introduce them as reading books, and our scholars will, without interfering with other studies, be on the high road to agricultural knowledge, and before he is aware of it, there will be an elbowing for room to introduce something more of the same sort of knowledge.

"*Second*, Our teachers are not qualified to teach it, and have no means of explaining it." Within our remembrance it has been said a railroad could not be built to connect the harbor at Boston with the Hudson. There were no men qualified to car-

ry on the work, and no means to do it. But the thing has been done for a score of years, and in a few more years, this same road will be one short link in a chain of roads connecting the Atlantic with the Pacific. Agriculture will be taught in our common schools. If we have not teachers, it is no fault of the cause. Let them be called for, and they will come up, a host innumerable. *The people* are beginning to demand such teachers. Let our Board of Education and Normal Schools so far yield to the call of the people as to see that a full supply is provided.

"And, *thirdly*, are not old enough to understand it, and have no time to devote to it, without neglecting their other studies." Here Mr. Goldsbury assumes another undefined position, to wit, "our scholars generally are not old enough to understand it." At what particular age this power of understanding comes, he does not enlighten us by saying. The love of natural objects is inherent in children. Flowers and fruits are early subjects of their admiration. Animals are also petted in early life. They begin their little farming operations as an amusement very young. We have seen children four and five years old, planting their little patches in out of the way places, and imitating their fathers in their little hay and harvest fields. Are they old enough to understand the principle when they do the thing?

They are not "old enough to understand it," and yet we have shown in many of our schools, scholars were led forward in other studies quite as intricate and much less useful. Again, many of the winter scholars in our country schools spend their summers in practical farming, and are good help to their parents. It is a gross libel upon these boys to say they are not old enough to understand the science of farming.

Last summer we noticed several well arranged gardens on the grounds of school-houses, worked by the scholars, male and female. They dug the ground, did the setting out, sowed the seeds and kept the plants clear of weeds. Were these scholars incapable of understanding all about the science of these things? "They have no time to devote to it without neglecting other studies." We consider this objection fully answered by showing that we have several studies in our common schools of far less practical utility than that of agriculture, and these ought to give way to it, in so much as the less important should yield to the more important. That if it cannot be tolerated further than that, books like those we have named should be introduced as reading books, through which much practical knowledge would be gained, without interference with other studies, and a vast amount of knowledge would thus be acquired. Here we leave the subject for the present, hoping Mr. Goldsbury and others will pursue it with their pros and cons until public opinion shall be reached, and public action follow as the result.

WILLIAM BACON.

Richmond, Nov. 10, 1862.

GRAPE CULTURE.—Marks & Miller, lessees of Fowler's High Gap Farm, in this county, have developed a new feature in the rich resources of our climate and soil. We refer to the culture of the grape. From less than four acres they have this season sent to market no less than *seventeen thousand pounds* of luscious Catawbas. They sold the entire crop to an enterprising fruit dealer at Chicago for 7½ cents a pound.

Mr. Marks, who has a life-long experience in the business in one of the largest vineyards of Cincinnati, has purchased a small farm a few miles below the city, and will enter largely in the culture of the grape.—*Lafayette Courier, Iowa.*

For the New England Farmer.

VEGETABLE GROWTH.

MR. EDITOR:—I sometimes wonder that the science of botany, teaching as it does so many curious and interesting matters concerning the structure and growth of plants, is not more studied by farmers and their families. There is no branch of knowledge that gives us higher ideas of the wisdom and goodness of the Infinite Architect. Such varieties of structure, such changing forms of beauty, such wonderful adaptation of means to ends, such bountiful provisions for the supply of animal food, are shown in the vegetable kingdom, that we cannot but be filled with reverence when we think of Him whose wisdom has devised and whose hand has wrought all this beauty and use.

If we attempt to read from the book of Nature the history of a single plant of our common Indian corn, we shall soon find how little we know, and shall wish to know more even of that plain, every-day thing. We cultivate it year after year, we have studied how to make it grow, we know what kind of soil it likes, what manure is best adapted to increase the stem and leaf, and what will give us larger returns of grain. But there is much beside this in the history of the plant that should interest us.

Let us take a grain of corn and plant it. We know that when it is deposited in the moist earth it soon begins to swell, and then pushes out a little white root, which runs down into the ground; next a small white shoot starts up towards the surface, becoming green as soon as it gets above ground. Now how is this done? Who can tell why the rootlet always takes a downward course and the plumule reaches upward? What subtle influence of the air or light changes the plumule from white to a rich green? How does it grow at all? We see that the plant daily becomes taller, daily increases in thickness, soon shows other leaves pushing out, then a stout stem is built up, on the top of which what we call the spindle presently shows itself, soon to hang out its pollen-bearing stamens; side branches strike out at the axils of the leaves, and a soft thread-like cluster of long pistils appears at the tips of the branches to receive the pollen from the staminate flowers above and convey its magic influences to the germs on the young ear, causing them to enlarge and in time to harden into the ripe seed. These are some of the more apparent operations of nature while producing this invaluable grain.

Now would it not be interesting to all who labor to assist the corn to grow, to study the mysteries of vegetable growth? Would we not like to know the elements of which the seed is composed, what chemical changes take place in it during germination, how the plant draws nourishment from the earth seemingly in the form of mere water, but that water containing in solution

the elements of nutrition; how the vital chemistry of the plant changes the liquid and gaseous material to solid supstances; how the various organs select and distribute the suitable material for the different parts; how the selected atoms are arranged one by one to enlarge the stem, the leaf, the staminate and pistilate flowers, and the seed? The study of these wonders of nature seems to me to be peculiarly appropriate to the farmer. He has the most favorable opportunities to investigate them; he is constantly in the great school-room, and his books are ever open before him. He needs but to use his faculties of observation, with such aids as are easily accessible. His thoughts can be active while at his labor, and the contemplation of the various wonders before him will assist him to forget the back-ache and general fatigue that often trouble him. He will find objects of interest in the very weeds that he is hoeing up, and sometimes be strongly tempted to preserve some rare weed, that he may study its history and character. He will thus find pleasures mingling more and more with his fatigues, and may in this manner receive compensation for many of his discomforts. M. P.

Concord, Nov., 1862.

For the New England Farmer.

AGRICULTURE IN COMMON SCHOOLS.

MR. EDITOR:—It is generally admitted that brevity and perspicuity are prime qualities in English composition. I intended to convey this idea in my last communication, but unfortunately I made use of so bold, so startling and so unusual a figure of speech, that you did not see fit to print it. "More Anon" appears to be earnestly engaged in reviewing and correcting the opinions of others, while, at the same time, he has no clear and definite ideas of his own.

But to the question at issue: It is a sufficient answer to all that *has* been said, and to all that *can* be said, in favor of introducing the study of agriculture into our common schools, to say that the thing is simply impracticable. It cannot be done. As our schools are at present constituted, agriculture cannot be taught or learned in them; and for this plain reason, because they are destitute of all the necessary means of teaching it. They have not the tools, the implements, or the materials to work with. They cannot teach by example all the different kinds of farm work, and the correct use of every kind of farm tool or implement. They can teach none of these things, simply because they have not the means. This would be especially the case in the winter, when the frozen ground, the bleak winds, and the drifting snows, put a full stop to out-door farm operations, and render all practical instruction in agriculture vain and useless. And the attempt would not be much better in the summer, as the instruction would have to be given almost exclusively by young female teachers in the open field to children between the ages of three and fifteen years, a large proportion of whom are females.

Again, it is a sufficient answer to all that *has* been said, and to all that *can* be said, in favor of introducing the study of agriculture into our common schools, to say that it would be the means of diverting the attention of the scholars from all their appropriate and necessary studies, to the great injury of the schools! For instance, while the teachers were giving instruction in "whoa, haw, gee buck," that is, teaching how to drive and manage a team; or on the composition of manures; or on plowing, planting and hoeing; or on the sowing of the different kinds of grain; or on the curing of hay and grain; or on the making of butter and cheese; or on the rearing, feeding and fattening of animals; or on any other topic connected with good farming, all the other important appropriate studies of the schools would be entirely neglected. There would be no progress made in spelling, reading, writing, grammar, geography and arithmetic, while the teachers were vainly attempting to give practical instruction in farming without the means of doing it.

Again, it is a sufficient answer to all that *has* been said, and to all that *can* be said, in favor of this question, to say that there is no more reason why agriculture should be taught in our common schools, than there is that all the various mechanic arts should be taught there; or that military tactics, or law, or divinity, or medicine, should be taught there. These are all useful branches of knowledge, and ought to be thoroughly taught and well understood, in order to be skilfully practiced. But this is no reason why they should be taught in our common schools which were established for the purpose of teaching other branches of a more general and rudimental character, and of universal application and necessity—of teaching the young of both sexes the common branches of a common school education, so as to prepare them for other studies and qualify them for any business or pursuit. JOHN GOLDSBURY.

Warwick, Mass., 1862.

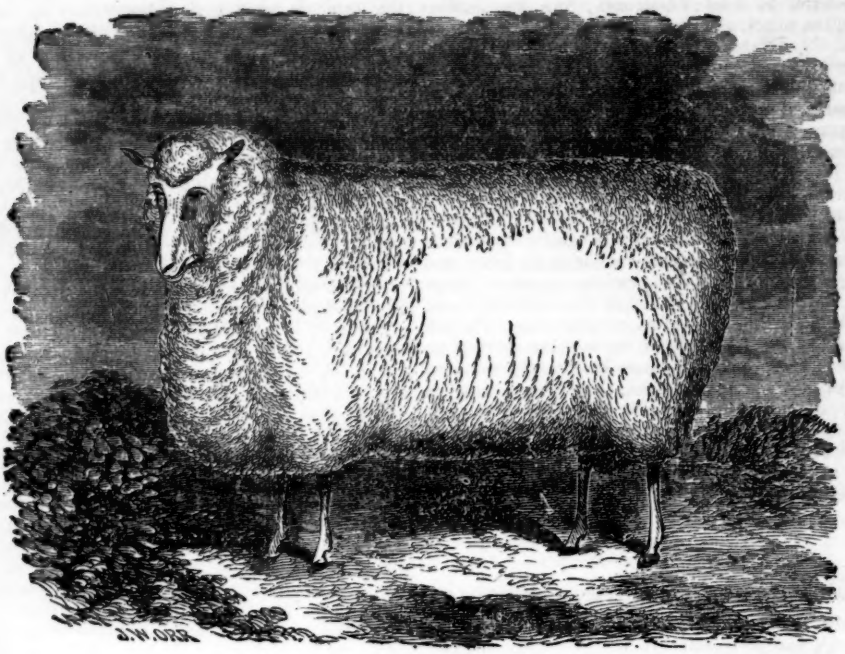
REMARKS.—Our correspondent will observe that we have omitted a few expressions which had no bearing upon the points in issue, and which, it seems to us, would tend to irritate and confuse.

For the New England Farmer.

EXHIBITING HERDS OF CATTLE.

I hope the suggestion of "Mass.," in your paper of the 25th of October, will be fully elaborated, by some one experienced in keeping and rearing of cattle. I know it is easy to theorize on such topics, but a few facts, well attested, are worth all the speculations imaginable. The best cattle show I ever attended, occurred a few years since, at Danvers Plains, Essex county, when a herd of twenty milch cows, selected from fifty kept on the Burley farm, in Beverly, then owned by the heirs of William Burley, Esq., were exhibited. These were a fine specimen of what is considered the New England breed of cattle. They were all of a deep red color, of medium size, of an age from six to ten years, and excellent milkers, not giving an extravagant quantity, but yielding through the season at least two gallons per day. An exhibition of half a dozen herds like this would be worth looking at. Let the herds be compared; their manners of being fed and kept, and their products; this would be a cattle show, indeed; not such as is usually seen at our exhibitions. ESSEX.

October 28, 1862.



A BEAUTIFUL COTSWOLD BUCK.

The accompanying illustration is a portrait of a Cotswold Buck, owned by Mr. P. W. JONES, of Amherst, N. H., from the imported stock of Geo. C. HITCHCOCK, Esq.

The culture of sheep has been greatly neglected in New England for many years. During the same period, the demand for wool has largely increased, and so has the taste for good mutton. Why, then, has wool and mutton growing been constantly on the decrease? Many a New England farmer could answer this question in sorrowful replies, who has found his pet flock dwindle away night after night, by the act of some fell destroyer that no power of his own and no arm of the law could then reach. This has been, in our opinion, the principal cause of reducing the number of sheep in the New England States to about one-fifth of what it was at its highest point. Some other causes undoubtedly existed, — but their destruction by dogs was the principal one.

Now there is a better state of things, the strong arm of the law, and a better sense of justice, have come to the aid of the farmer, and he is encouraged once more to see if he cannot meet something of the demand made for wool, and thus keep at home the piles of gold that are sent abroad for it, and gratify the taste that has grown up for good mutton, rather than for so much beef and pork.

These things are constantly awakening attention to sheep husbandry, so that numerous inquiries are made as to the best breeds for wool and for mutton, for rapid growth, docility, hardiness, and every thing that affects them as profitable animals.

But opinions are divided, and we believe with entire sincerity; as locality, and the manner of feeding and tending a flock, would have a decided tendency for or against the profits. Some persons of large experience declare for the Spanish merino, while others greatly prefer the Cotswold or Southdown, and perhaps even a few for the Saxony. Then, there are grades of these that are esteemed by some as even preferable to the pure bloods of either class. It is proper for him who has a decided preference for any one variety, to hold it in high estimation, and to speak earnestly in its praise,—but it would be folly to denounce other breeds as worthless that may have failed with him, but which have often succeeded well with others. Location and management seem to have a more direct and visible influence upon sheep, than upon any other of our domestic animals.

We are glad to find our farmers giving more attention to sheep husbandry, and believe that in proper localities they will find it more profitable than the raising of milk now is. If the culture of

sheep were more general, a less number of persons might be engaged in producing milk, and consequently, the price of that article become fairly remunerative.

In his late address before the Wool Growers' Convention in Vermont, Col. Needham says the estimated cost of keeping sheep in different sections per year, is,—in Illinois, 60 cents; Iowa, 75 cents; Michigan, 83 cents; Virginia, 60 cents; New Jersey, 60 cents; Pennsylvania, 50 cents; Maine, $1; California, 65 cents, and Vermont, $1,30.

We hope our experienced correspondents will furnish some practical articles for the *Farmer* on *Sheep Husbandry.*

The *Cotswold* is the subject before us now,—and many, in these days of inquiry, will ask, "*What is a Cotswold sheep?*" Mr. Robert Smith's report on the stock exhibited at the late show of the Royal Agricultural Society, says: "It is a bold and commanding animal, with finely arched neck, broad, straight back, arched ribs, and length of quarter, carrying an enormous weight of carcass upon clean legs. The fore-top on the forehead of no small dimensions is a strong characteristic of the Cotswold breed. These animals have always had strong enemies to contend with—wind and weather. They seem to have trampled over every obstacle, and bid defiance to the other breeds for weight of carcase, wool and quality combined. We will not venture to inquire how these are produced at so early an age, but content ourselves with the oft-told stories of 50, 60 and 80 pounds per quarter, and from 10 to 18 pounds of wool."

THE AMERICAN SOLDIER.

The Paris *Pays* publishes an extract of a letter written by Gen. Cluseret, a French officer now in the service of the United States, in which he says of the soldiers under his command:—

"After two months of campaign and sufferings such as I never endured, even in the Crimean war, where we never were in want of food, nor exhausted by long marches, I can speak to you knowingly of the American soldier. During all that time we have been marching night and day, oftentimes without bread, with half of our men shoeless, exposed to a chilly rain, without shelter, tent or village. We have thus walked between 150 and 200 miles. But that which, in my estimation, makes the American soldier the first in the world—the equal of the French soldier—is, that I never heard him utter a complaint or grumble. I never was compelled to inflict a punishment upon him. When I ordered a straggler to fall in, he used to show me his naked feet and hurry on as much as he could. I have but a word to express my opinion of the American soldier: he is an admirable soldier. He adds to the qualities of the French a patience and resignation which I did not think it possible for a soldier to acquire."

For the New England Farmer.

"HOW IS IT, THEN, THAT FARMERS GET ALONG?"

FRIEND BROWN:—Owing to some unaccountable delay in your Halifax agent, I have not obtained a monthly since April. So to supply the place of new matter, I have been re-perusing the old; especially "Pinkham and his criticisers" on farm profits. One writer, "J. A. A.," although insisting on the profit, yet says he has looked in vain for an answer to the above heading. Now if the subject is not worn threadbare, you will permit me to try for an answer to this very important query.

We all know of instances where a man has begun with nothing, as we say, and in a few years has paid for his farm, stock, &c., besides supporting his family; but we wish to know how it has been done. I have had, lately, some little experience of the income and outgoes of farming, having kept a minute farm account for several years, and I have thus far succeeded in obtaining a surplus, entirely within the farm, and have also improved it yearly, though I have had my share of bad luck in crops and herds. He might express the term, "bad luck," more correctly, if not so concisely, in nine cases out of ten, thus:—the natural result of carelessness and ignorance.

Before going further, I will mention the five essentials of farming, to make it profitable, without going to the wood-lot or selling the corner-lot, as Mr. P. urges, and he will agree that they are all important.

I find the first requisite is *Prudence;* and I would like space to give a list of the many different themes that cluster around it. The second is *Capital*, even if it only lies in health and strength of body and mind, with skill and knowledge. The third, *Honesty*, or else the profits might arise from overreaching, instead of farming. The fourth, *Permanence of occupation*, either by long leases or ownership, as that will enable the farmer to adopt all necessary rotations, plan ahead, and work out a system peculiar to his land—as there are scarcely two contiguous farms in this valley that require exactly the same system; and lastly, over all, the *Blessing of the Creator;* with these, and a market, any man can bring the balance on the right side of account.

Now, as I said above, I have found farming profitable, and my general farm account proves it; but when I try the figures, that cannot lie, on the cost and value of single crops, or the raising and fattening of cattle, swine, &c., *a la mode de Pinkham*, I generally get the like result as he, and here lies the difficulty, and here also stands the solution. Mr. P.'s accounts—see Vol. XI., page 563, *N. E. Farmer*—are not properly farmers' accounts; they may be a tailor's or stevedore's memorandum of what it cost to obtain an acre of land and hire labor, and buy manure, &c., for a crop of corn, or to get a calf one day old, and buy everything for it till it is a cow. This is not real farming. It may be amateur farming, and it is as innocent a way of money-spending, as going to the watering-places, or patronizing the race-course.

The prudent farmer don't buy his labor and manure; he does his own work, collects and spends his manure, without cash outlay, or any outlay, but his time and strength; in a word, his time is

devoted to his land; cutting wood and poles in winter; then fencing; then in spring, planting in hope; cultivating, haying, composting, &c. through the summer; reaping the fruit of his labor in autumn; while his sales all the year round bring in the dollars, and the difference between his cash outlay and his cash receipts is his profit, and yet our farmer is a stay-at-home man; he don't hire out on the road, or go about hewing, to get money to pay his taxes; for the old proverb teaches, that "The foot of the owner is the best manure." There is always enough to do on his own land, by which his future work will be easier done, with greater profit.

Hoping to recur to this subject again, when I will enter into figures bearing upon the first and fourth requisites, as above, I remain as usual,

ANNAPOLITAN.

Clarence Centre, Nova Scotia, Oct. 18, 1862.

PRODUCTION OF GRAIN.

We compile from *Wells's Produce Reporter*, published in Chicago, a few figures relating to the amount of grain received there at different periods of the year. Total receipts of wheat for the week ending October 25, 1862, 436,691 bushels, of the value of $391,144; previously, since January 1st, 10,184,481 bushels, of the value of $8,755,385. Of corn there was received during the week ending October 25, 1862, 951,140 bushels, of the value of $313,751; previously, from January 1st, the whole amount was 26,677,877 bushels, of the value, *in toto*, of $7,858,511.

Look at the amount of grain, and then look at its value; and these are but two staples out of four or five great ones. Rye, oats and flour we have not quoted at all. Up to October, 25, 1862, grain to the amount of 36,862,358 bushels, of an aggregate value of $16,613,896, passed through one port of the great grain-growing countries of the West.

In connection with these figures, examine the quantity produced in Iowa, as compiled from a journal published in that State. The yield of wheat is estimated at 20,000,000 bushels this year; being 1,750,000 bushels more than the crop of 1861. There have been 1,325,000 acres of corn cultivated this year, which will yield 76,250,000 bushels, or an excess over the crop of last year of 16,000,000 bushels. Oats will reach 10,000,000 bushels; hay, 1,000,000 tons; sorghum syrup, 3,000,000 gallons; and potatoes double last year's quantity. What are the fables of the valleys of diamonds and mines of rubies and gems, compared with such solid and substantial wealth as this?—*Scientific American.*

A CURE FOR WARTS.—Apply nitric acid (aqua-fortis) to the centre of the wart, till it begins to become painful; then rub it over with sweet oil or any other, and in two or three days the wart will come off.

Another.—Dissolve as much common washing soda in a tablespoonful of water as the water will take up; wash the warts with this for a minute or two, and let them dry without wiping. This, repeated, is said to destroy the ugliest warts in a short time.

For the New England Farmer.

PUNCTUALITY.

I noticed in the *Farmer* of Nov. 1 an article from "Sarah," entitled "Being in Season." The beneficial results of promptness cannot be questioned. But I do question whether a farmer's wife *can* be so strictly and unwaveringly punctual as Sarah recommends. Many a wife has "tried it;" indeed, nearly every young wife commences housekeeping very systematically, but soon finds, to her sorrow, that "rules will not work." Could she be supplied with all the assistance which she needs, but which so few young farmers can afford, —and could she also receive the sympathy and co-operation of her husband, I have no doubt there could be perfect success. But the fact is, men, as a class, do not believe in punctuality; at least, they do not show their faith by their works.

Suppose that twelve is your appointed dinner hour. After a morning of unceasing toil, perhaps with a fretful, teething baby in your arms, the nice dinner which is to go so far toward keeping the love of your husband, is all prepared just as the bell rings for noon. You smooth out the wrinkles of care and weariness from your face, the "pleasant smile and kiss of welcome" are all ready, but the "lord" comes not. Five minutes pass,—ten, —the steam from the roast meat and potatoes grows thin and vanishing,—fifteen, and potatoes and pudding are placed in the oven "to keep warm," while you snatch a book or paper to fill up the spare moments. Half an hour passes, and the wrinkles return in spite of all your efforts to "possess your soul in patience." You are glad of the time to read or tend baby, but you cannot help thinking how the washing or ironing, which was left unfinished, might have progressed in that half hour, and how the afternoon which you depended upon for sewing must be shortened and broken. No. "Better" *not* "wait fifteen minutes yourself, than cause your husband to wait five." *Why* isn't a woman's time as valuable as a man's? Why must she be the soul of punctuality, or be met by her husband "on his pinnacle of sternness," while he waits without reproof to finish just that bit of work before he leaves it, or to talk over the last war news with the neighbor who is passing?

Will it do to excuse yourself to morning callers? You have no girl, and answer the ring of the door bell yourself. You meet a friend who has few family cares herself, and does not know or realize yours. You really value her friendship, and a half hour's chat with her would do your soul good. Now, will you inform her that she interferes with your domestic arrangements, that husband expects his dinner at twelve o'clock precisely, and will take no excuse if it is delayed, and therefore she will oblige you by going her way? How many friends would you have? And how comfortable would you feel? "Invite them into the kitchen." I, for one, do not want my visitors in the kitchen. They are in the way there. Just so surely as I continue my baking or ironing before the criticising eyes of a caller, the dough adheres provokingly to the moulding board, and the iron to the shirt-bosom, until I am worried into a fever heat, and seek relief by inviting my visitor to her proper station, the parlor. In my humble opinion, the man who will take no excuse for an occasional late meal, and who will not patiently and cheerfully

wait for his wife as often as he causes her to wait for him, ought to be excluded from the ranks of civilized society. He is a tyrant! Let the gentlemen take a few lessons in punctuality (and also in patience) and I have not the slightest doubt that their wives will "be in season." MARGIE.

REMARKS.—Capital. There are evidently two sides to the question.

AUTUMN.

Autumn! Forth from glowing orchards stepp'd he gaily in a gown
Of warm russet freaked with gold, and with a visage sunny brown;
On his head a rural chaplet, wreathed with heavily drooping grapes,
And broad shadow-casting vine leaves like the Bacchanalian shapes.

Fruits and berries rolled before him from the year's exhausted horn;
Jets of wine went spinning upwards, and he held a sheaf of corn;
And he laughed for very joy, and he danced from too much pleasure,
And he sang old songs of harvest, and he quaffed a mighty measure.

But above this wild delight an overmastering graveness rose,
And the fields and trees seemed thoughtful in their absolute repose;
And I saw the woods consuming in a many-colored death—
Streaks of yellow flame down-deepening through the green that lingereth.

Sanguine flashes, like a sunset, and austerely shadowing brown;
And I heard, within the silence, the nuts sharply rattling down:
And I saw the long dark hedges all alight with scarlet fire,
Where the berries, pulpy-ripe, had spread their bird-feasts on the briar.

I beheld the southern vineyards, and the hop grounds of our land,
Sending gusts of fragrance outwards nearly to the salt sea strand;
Saw the windy moors rejoicing in their tapestry of fern,
And the stately weeds and rushes that to dusty dryness turn.

WINTER.

In a foggy cloud obscurely, entered Winter, ashy pale,
And his step was hard and heavy, and he wore an icy mail:
Blasting all the path before him, leapt a black wind from the north,
And from stinging drifts of sleet he forged the arrows of his wrath.

Yet some beauty still was found, for when the fog had passed away,
The wide lands came glittering forward in a fresh and strange array;
Naked trees had got snow foliage, soft, and feathery, and bright,
And the earth looked dress'd for heaven in its spiritual white.

Black and cold as iron armor lay the frozen lakes and streams;
Round about the fenny plashes shone the long and pointed gleams
Of the tall reeds, ice-incrusted; the old hollies jewel-spread
Warmed the white marmoreal chilliness with an ardency of red.

Upon desolate morasses stood the heron like a ghost;
Beneath the gliding shadows of the wild fowls' noisy host;
And the bittern clamored harshly from his nest among the sedge
Where the indistinct dull moss had blurr'd the rugged water's edge.

JAMES S. GRENNELL.—We learn through the newspapers that this gentleman has been appointed by Mr. Commissioner NEWTON, to the chief clerkship in the Agricultural department at Washington. We know Mr. GRENNELL well—know him in the social relations of life, and as connected with agriculture, theoretically and practically, having been associated with him in the Massachusetts State Board of Agriculture, where there were excellent opportunities to learn his tastes, powers and energy in the great subject, and we do not hesitate to say that we believe the appointment a most judicious one. Mr. G. has youth, health, an ardent temperament, sound learning from books and institutions, together with untiring energy, integrity, and much personal acquaintance and experience on the farm—all of which combined give him qualifications for the position with which he has been entrusted, which few can expect to possess. We congratulate the Commissioner, in his wise selection, and have no doubt but Mr. Grennell will relieve him of a vast amount of labor which might embarrass him in the general management of the Department.

For the New England Farmer.

THE YEAR OF FRUITS.

Probably no year in the history of this country has produced so large a supply of fruits—particularly apples and pears—as the current season of 1862. Unlike most other seasons, where a scarcity in one section has been supplied by profusion in another, the crop has been large throughout all the Northern and Middle States. Here in Massachusetts, and particularly in the immediate neighborhood of this metropolis, the largely increased attention paid to the cultivation of fruit trees for the last ten or fifteen years, has culminated in a supply of apples and pears out of all proportion to former years, if not, indeed, out of all proportion to the demand. I am myself one of the victims to this abundance; for almost everything I have in the shape of fruit tree has this year insisted upon bearing; and so far from having a market for the surplus, (having natural scruples against wasting it,) I have exerted myself about as much in giving it away, as I should, under ordinary circumstances, in marketing double the quantity. If such is my experience, with only a garden of half an acre, what must be the fate of those who count their pears by hundreds, and their apples by thousands of bushels!

But let not the fruit-growers be discouraged. The causes which have led to the extraordinarily low prices of fruit this season are numerous, and will not be likely to occur conjointly again. In the first place, there is an over-production; in the second place, a large class of consumers have gone to the war; in the third place, the scarcity of small change has interfered greatly with the retail trade at the numerous fruit stands in the cities and large towns; and in the fourth place, though the quality of fruit—pears in particular—has been unusually fair to the eye, it has greatly lacked that high and delicious flavor which has distinguished it in less productive seasons. This last peculiarity has been a subject of general remark, and I attribute it not to the over-production, but to the excessive moisture of the season, which has caused the fruit to grow large and fair, but deprived it of the better qualities of richness and flavor. Some few varieties indeed there are, which seem not to have been affected in this way; but out of some fifty varieties which I have tasted this season, not more than half a dozen have come up to the usual standard of excellence. The Rostie-

zer was the only early pear which answered to its established reputation, though I have a pear nearly as early, which I purchased at some auction under the label of Souvrain d'Ete, (Sovereign of Summer,) which I have not found in any other collection, and has made with me a very high reputation. Then there is the Langelier, the Sieulle, the Suzette de Bevay, and another for which I have "no name;" they are all that came up to the standard of what I consider pears ought to be. My own experience in this matter, I find, has been more or less that of other and larger fruit-growers, and I think I cannot be mistaken in attributing it to the cause before named. Fruit-growing upon clayey soils has been most injuriously affected in this way; but even upon sandy or gravelly soils this peculiarity has been marked. Indeed, I think for the last four or five years, the quality of pears has been injuriously affected by the moisture of the weather before and at the time of ripening.

Of course, after such a season of plenty in the fruit culture, we must expect the next to be one of scarcity; and so far as my observation extends, very few fruit buds have formed for next year's development. This remark does not apply to the cherry; for the crop of that fruit having been to a great extent cut off the present season by the damage to the fruit spurs, occasioned by the severe frosts of the spring before, they are now showing a profusion of fruit buds beyond anything I ever witnessed. Of grapes and quinces we cannot judge, as their fruit-buds are formed upon the new wood of the same season; but it is reasonable to suppose that, the crop having been large this year, they have exhausted something of the fruit-bearing energy, which will tell upon the fruit crop of the next. The currant bushes also appear to have exhausted themselves somewhat by their late exuberant crop, and their promise for the next season is light. We have only to "wait and see." E. C. P.

Somerville, Mass., Nov., 1862.

REMARKS.—Our correspondent has given four causes of the low price of fruit this autumn, and they are all correct. There is another cause, however, for the low price of fruit which has prevailed—namely, the unhappy and unnatural rebellion of our Southern brethren. Some of the consequences of this are the derangement of trade extending through all the circles of business. In former years, when fruit has been plenty, a large amount of it has found its way to the Southern States, in exchange for oranges, sweet potatoes, and many other articles of traffic. It was not shipped in large quantities by a single vessel, but made up a portion of the freight of numerous coasters that were constantly plying between the New England ports and those of nearly all the South. Autumn pears, even, could be sent in some of the swift steamers to many of the Southern ports, all of which made a demand which has not existed this year. In consequence of the general derangement in business, we have reason to believe that the shipment of apples to Liverpool has been less than usual this year. Still, under these circumstances, apples are selling at a rate that affords the farmer a profit equal to an average realized on his other crops. The present causes of low price cannot long exist.

THE GRAPE CURE.

The grape cure lasts for from three to six weeks. The regular season commences, on an average, about the middle or the first week in September, and lasts to nearly the end of October. Everything depends on the state of ripeness of the grapes. The amount of grapes daily taken by persons undergoing the cure, varies from about four and a half to seven or eight pounds; in some cases even as much as nine pounds is eaten. They are taken three times a day, at the same hours at which mineral waters are usually drank in Germany—before breakfast, at eleven o'clock in the morning, or two hours before dinner, and at from five to six in the evening. Persons generally commence the cure with from two to three pounds a day, and advance daily in quantity till the larger limit is reached. The skins and the seeds should not be swallowed. The largest portion is usually consumed at eleven o'clock.

Some doctors do not allow their patients to take any other breakfast than the grapes, accompanied by a roll of bread. The usual plan, however, is to permit them to take a breakfast of tea or coffee with bread, but no butter, after the grapes. A strict diet is universally prescribed; all fat, sour or spiced meats and pastry are forbidden; a small quantity of white light wines is permitted, but red wines, beer and milk must be avoided. The evening meal should be a very light one. The system pursued at Durkheim is the same as the one followed at the other places where the grape cure goes on; and the grapes which are used in the cure both at Vevay and Montreux, are, as at Durkheim, for the most part, the Gutedal and the Austrian varieties.

The disease in which the grape cure is considered by the German doctors to be the most beneficial is in affections of the mucous membrane of the respiratory organs. The secretive powers of this membrane are roused, and it is enabled to throw off obstructions which have assumed a chronic form. Cases of bronchitis and pneumonia are said to have been often cured, even in patients of a scrofulous constitution; and much benefit is said to have been experienced by persons affected with tubercular consumption in its earlier stages. Where spitting of blood has set in, much caution must be used as to the amount of grapes taken. Persons affected with any of these complaints are in the habit of coming to Durkheim yearly from all parts of Germany.

A well-known grape-grower in New York some years ago put forth a theory of curing disease by the use of grapes, but he never carried his theory into practice beyond the circle of his own family. At Durkheim they do it on a larger scale.

LUCKY DAYS.—The Anglo-Saxons deemed it highly important that a child should be born on a lucky day, on which the whole tenor of his life was supposed to depend; for, in their opinion, each day had its peculiar influence upon the des-

tiny of the newly-born. Thus, the first day of the moon was preferred above all others, for the arrival of the little stranger, for they said, "a child born on that day is sure to live and prosper." The second day was not so fortunate as the first, as the child born on that day "would grow fast but not live long." If he was born on the fourth day of the moon he was destined to become a great politician; if on the tenth, a great traveller; and if on the twenty-first, a bold marauder. But of all the days of the week on which to be born, Sunday was by far the most lucky, and if it fell on the new moon the child's prosperity was destined to be unbounded. Friday was an unlucky birthday, not only because it was the crucifixion of our Lord the Saviour, but because, according to Anglo-Saxon calculations, Adam ate the forbidden fruit on Friday, and was also expelled from Paradise and died and descended into hell on that day.—*Thrupp's Anglo-Saxon Home.*

POTATO STARCH.

It is not so generally known as it should be, that starch made from the common potato furnishes an excellent substitute for arrow-root, as a wholesome, nutritious food for infants. It also makes a good cheap pudding for the table, if cooked like sago, and as it has not the medicinal properties of arrow-root, it is much to be preferred as an article of daily food, except for children who are subject to diarrhœa or summer complaint.

The process of making the starch is so simple, and the time required so short, as to put it into the power of every one having the means at hand. Wash any quantity of potatoes perfectly clean, and grate them into a tub half full of clean cold water; stir it up well; let it settle, and then pour off the foul water; put the grated potato into a fine wire or coarse hair sieve; plunge it into another tub full of clean cold water, and wash the starch through the meshes of the sieve and throw the residue away; or wash it again if any starch remains in the pumice; let it settle again, and repeat this process until the water comes off clear; scrape from the top any remains of the pumice; then take the starch out and put it on dishes to dry, and it will be fit for use immediately. When wanted for use, mix as much as may be needed in cold water, and stir it into boiling milk, or water, if preferred, and it requires no further cooking.

It also makes a stiff and beautiful starch for clearing thin muslins or laces, and is much less troublesome to manage than that made of wheat. —*American Agriculturist.*

Remedies for Crib-Biting.—In a former paper, there was an inquiry for the cure of a crib-biting horse, and I have looked for answers, and as yet have seen but one, and that was to buckle a strap around the neck. I owned a crib-biter once, and was told to try the strap, and the effect was to cut the mane out, but the horse would crib when the strap was off and almost as often when on—keeping in a stall without rack or manger, and taking the food to the horses in boxes at feeding time, or soaping the parts thickly with soft soap on the spots he uses for cribbing, and in fact all parts reached by his teeth.—*Country Gent.*

HOW THE FRENCH ECONOMIZE.

There are few American families who know exactly the expenses of a year; they all know, probably, that it costs about so many hundred or thousand dollars on the whole. But every European family knows the expense of every year, of every month, day, or hour—the exact cost of every dinner, supper or breakfast, of every morsel they eat, of every drop they drink. Every German or French housewife knows not only how much the meat, potatoes and bread of any meal may cost, but also the water in which she has cooked them, and the coal or wood she has burned to boil the water. It is infinitely amusing to an American to observe such a *menage.*

In Paris there is no aqueduct, the fountains of the city belong to the government, and the water is sold by barrels and pails full to water-carriers, who supply families at so much a gallon. In a house of five stories, there are two families on each floor, making ten who ascend the same staircase, up which all articles for family use must be carried. It is a rule that water, coal, and all heavy articles must be taken up before noon, as about that time the *concierge* cleans the hall and stairs, and they must be kept clean for callers in the afternoon. In every kitchen is a receptacle for water, consisting of an oblong box, containing two or more pails full, according to the means of the family, and their ideas of cleanliness. In one corner of the box is a small portion of porous stone, which serves as a filter, and to which is a separate faucet. The *porteur* brings two large pails full of water for three cents, and comes every morning. It is, therefore, very easy to know how much the water costs in which the dinner is boiled.

In the same kitchen is a box for coal, which contains the quantity for which they pay forty cents, and they know exactly how many meals can be cooked with this quantity. If they have guests to dinner, they use an extra quantity of water and coal, and know how many cents worth are devoted to each guest, and then of course they know if they can afford to invite anybody again!

They know exactly how much of every article is used every day. The streets of Paris are lined with small groceries, where everything is purchased by the cent's worth, and are certainly very convenient for people who earn only a few cents per day. If a family comes into the neighborhood who does not patronize these small shop-keepers, it is considered a great injustice, and we have known them to commence a regular persecution of such a family, annoying them in every possible way. They keep coffee, burnt and ground, sugar, powdered and in lumps, tobacco, liquors, and every household article in infinitely small quantities.

The morning meal in every French family is bread and coffee, what they call *cafe au lait*, and is made of equal portions of coffee and chickory placed in a biggin, upon which hot water is poured so long as it runs through black. Of this they take two spoonfuls to a half-pint of boiling milk Three or five cents' worth of coffee is purchased every day, and the milkman and baker of course come every morning.

The second meal is at noon, though it is called breakfast, and is merely a luncheon, cold, or the remnants of yesterday's dinner. For these two, no cloth is put upon the table, and all ceremony is unnecessary.

The dinner is at six, and consists of meat and one vegetable, and something as a salad. I have seen a piece of meat, cooked without onions and garlic, and swimming in gravy. The salad is dressed with oil and vinegar, the rule being a spoonful of vinegar to three of oil, with pepper, salt and mustard, and also a little onion and garlic. The commencement of dinner is, of course, soup, as this is invaluable in every continental family. There are also soup shops, where a pint or a quart can be purchased every day, between four and six. But as often as once or twice a week, they have a boiled dinner, what they call *pot au feu*. In America the liquor in which meat and vegetables are boiled for such a dinner, is thrown away. It must certainly contain the best juice of the meat, and be very good and nourishing. In Europe it is every drop saved and eaten. They fill an earthern pot with meat and vegetables, never omitting the onions, and let it boil away one-half. For the soup, they season it with pepper, and sometimes with sorrel, parsley, and other herbs and spices, and thicken it with vermicelli or crumbs of bread. Whether it is delicious or not, it certainly seems too good to throw away. American housewives, who may be obliged to practice economy, can at least try it. Children may be taught to like it, and must not be told it is an institution of economy merely.

The dessert is almost invariably bread and cheese in winter, with a little comfiture. I do not mean to say that every family lives in this way, but I have been in many, and seen little difference. One is expected to take a bit of cheese about an inch square, and a tea-spoonful of comfiture. The little shop windows are also lined with jars of preserves, which are sold in quantities of two or three cents' worth, like anything else.

Cheese in the same way, a bit a few inches for dinner. The pepper and salt are no exceptions to the three cent rule, little three-cornered papers being the only receptacles for them. Cinnamon, cloves, nutmeg and similar spices have no location in a continental family, where they never make a pudding or pie, or cake of any description, and where they would consider it the greatest extravagance to eat such things. We are talking of families who have a regular income of $600 or $800, $1000 or $1500 a year. Such a family does not allow the whole expense of the table to be more than $8 or $10 a month each person, and we know those who limit it to $5 or $6, and yet who live very comfortably.—*Cor. N. Y. Com. Adv.*

WHAT IS DONE WITH HERRING.—The editor of the Calais (Me.) *Herald*, in noticing the large "catch" of herring this season, says: "Owing to the low price of smoked herring, converting them into oil is just now a more profitable business, Three hogsheads of fish make a barrel of oil, which is worth about $17. In some of the weirs 100 hogsheads are caught at a time. A boat load constitutes from five to ten hogsheads. They are salted before being boiled; the salting occupies about twenty-four hours, after which the fish are put into kettles which hold about 70 gallons each, and placed over the furnace, the boiling process usually occupying one hour. Fourteen hundred gallons of fish can thus be disposed of in a day in one establishment. This would make forty gallons of oil. The pressing process occupies but a short time and the oil is immediately fit for use. At present the oil commands a high price, making it much more profitable thus to dispose of the fish than to sell the smoked herring at 35 cents a box."

OLD EAGLES AND THEIR NESTS.

The Girard (Pa.) *Union* gives the following intersting account of a couple of old eagles, their troubles and their constancy. It says: Sixty years ago, when the township was first settled, a pair of eagles, the white-headed or bald species, had a nest in a tall tree on the farm of Mr. Kelley. They were not disturbed, and for twenty years they occupied the nest, annually rearing and sending forth a brood of eagles, when a violent storm overturned the tree, and of course destroyed their habitation. They then rebuilt their airy house on a lofty and inaccessible sycamore, on the farm of Richard Pettibone, adjoining Mr. Kelley's, and enjoyed perfect happiness for forty years longer, raising to eaglehood two or three chicks yearly. A few weeks ago, a high wind wrenched off a limb containing the nest, and threw it on the ground with such energy that it was torn to atoms, and a very young, and very bald eagle killed. The nest was very large, being made of about ten bushels of sticks and leaves. This aged and persevering couple are now making a third nest on another sycamore near the one lately destroyed. How old these birds are, is not known, but that they are the same pair found there by the earliest settlers, there is no doubt. They are so long familiar with the presence of men, that they can be approached within a few feet; and their great age, constancy and friendliness, have given them the respect of the neighbors, who would turn out and mob the unlucky sport who should attempt to shoot or despoil this royal family.

HOME AFTER BUSINESS HOURS.

The road along which the man of business travels in pursuit of competence or wealth, is not a macadamized one, nor does it ordinarily lead through pleasant scenes and by well-springs of delight. On the contrary, it is a rough and rugged path, beset with "wait-a-bit" thorns, and full of pitfalls, which can only be avoided by the watchful care of circumspection. After every day's journey over this worse than rough turnpike road, the wayfarer needs something more than rest; he requires solace; and he deserves it. He is weary of the dull prose of life, and athirst for the poetry. Happy is the business man who can find that solace and that poetry at home. Warm greetings from loving hearts, fond glances from bright eyes, the welcome shouts of children, the many thousand little arrangements that silently tell of thoughtful and expectant love, the gentle ministrations that disencumber us into an old and easy seat before we are aware of it; these and like tokens of affection and sympathy constitute the poetry which reconciles us to the prose of life. Think of this, ye wives and daughters of business men! Think of the toils, the anxieties, the mortifications and wear that fathers undergo, to secure for you comfortable homes; and compensate them for their trials by making them happy by their own fireside.—*Exchange.*

For the New England Farmer.

RETROSPECTIVE NOTES.

AGRICULTURE IN COMMON SCHOOLS.—In the November issue of this journal, we have as many as five communications upon this single topic, as may be seen by consulting the contents. It may be reasonably inferred from this unusually large number of articles upon one subject, in one single issue of the *Farmer* (Monthly,) that there is a very general interest felt in the settlement of the questions which have been raised in connection with this topic. The fact that a considerable number of minds are having their attention directed towards such subjects as the best practicable employment of the time our children usually pass in school; the best adjustment of their studies; the elevation of the business of farming from a thought-shunning following of tradition and routine, to a system of operations continually undergoing investigation and improvements; the elevation of farmers as a class from clod-fated drudges, who can give no reason for doing as they do except that their fathers or their neighbors have always done so, up to the rank of Men of Mind, who direct all their operations by the lights derived from science and experience, and who can always give most satisfactory reasons for every item of their management;—the fact, we repeat, that a great many minds among the readers of the *N. E. Farmer* are directing their attention to the subjects above-named, and to others of a similar nature, and are beginning to inquire what they can do for their sons by giving them good opportunities for acquainting themselves with every department of knowledge from which light may be gathered to guide, and improve the multifarious operations of the farm, is a fact of most cheering omen, and one that must be gratifying to the heart of every one who is made cognizant of it, if possessed in any fair degree of a patriotic or philanthropic, or reformatory and progress-loving spirit.

From this we may justly augur many beneficial results. As one of these results we may expect that the conviction will become established in a great many minds that the business of farming *can be* elucidated and improved by contributions from a knowledge of geology, chemistry, botany, animal and vegetable physiology, natural and mechanical philosophy, meteorology, and other physical sciences, and that the most efficient method of securing aid from all these sciences is to make the minds of our youth acquainted with their rudiments and more practical truths, while yet these minds are fresh and docile, and eagerly in quest of information as to the facts and phenomena of nature, and of explanations of these facts and phenomena. This conviction once firmly established in the minds of parents will lead to beneficial changes in the education of the rising generation, and, through these changes, to an improved condition of farmers and of farming, as also of all the other business and employments of human life.

Considerations such as the above lead us to hope that the best minds in New England, and in other districts of our country visited by the *N. E. Farmer*, will become interested in the discussions just inaugurated as to school education, studies, and employments, and as to the best methods of preparing the young, who are likely to become the agriculturists of the next generation, for becoming a more intelligent, a more efficient, a better informed, and a more respected and influential class in society, than their fathers or any who have preceded them.

In looking back over the several communications which have so far appeared in the columns of the *Farmer*, a discriminating observer would probably perceive that the remarks which have been made were rather than otherwise such as might be appropriate enough if addressed to an assembly of school officers or of a legislature gathered together to determine by legislative authority whether or no agriculture might be introduced into the schools of their State, or those under their jurisdiction. Now as no such assembly for such a purpose is ever likely to be convened, it seems that for the future the remarks of those who feel interested in agriculture and school studies would assume a form at once more practically useful, and more to the point, if they were directed towards the determination of a specific case, such as may really occur in connection with the general topic.

It would be exceedingly interesting to the writer, and doubtless to many others, to be informed as to the particulars of any case which has actually occurred, in which there was opposition offered to the introduction of this study into any common school. Meanwhile, until we shall have the details as to the actual introduction of agriculture as a study in some existing school, or the details as to an attempt to introduce it, with the success or failure of such attempt, we would suggest as a case most likely to occur, and as one to which writers might usefully direct their remarks, one substantially as follows: In a district of the State of ———, some resident of the same, having one or two boys old enough to help him on the farm, and intending to fit them for farmers, thinks they might study some agricultural text-book or other manual with more interest at school, in company with some other boys of their own age, than they would be likely to do solitary and alone at home. He, therefore, goes to some other farmers, as also perhaps to a farmer's widow, having boys from fourteen to eighteen years of age, and makes known his plan. They like it, and agree to join him. He then goes to the teacher to ascertain his mind as to the matter, and finding him acquainted with farm operations and farm literature, being a farmer's son, and perfectly willing to take charge of a class in agriculture, he calls a meeting of the district to allow him the opportunity of hearing objections, if any, and of answering them, or, in a word, of vindicating and defending the innovation he proposes to introduce. Now, here is a case such as seems the most likely to occur of any case that we can think of; and now, if those who may write on this subject would make their remarks applicable to such a case as this, it seems that they would be more practically useful, and more to the point, than if of a more general nature, or having no specific case of actual or probable occurrence in view. Let those who may feel disposed to object to the introduction of agriculture as a study in schools, write out the objections they would make to the plan of those who favored it in the case we have just sketched, or any similar one, and they may find that what they supposed of

great weight and validity when stated generally, is but of little force or weight when sought to be made applicable to a specific case, actual or quite likely to occur.

The objections which have been advanced with so much confidence and complacency by a gentleman who has had thirty years of "pedagogical drill," will be found to vanish into thin air, and to be void and of no force whatever in such a case as we have just sketched. For example, take his first objection, and it is obvious that the attention of the boys composing the class in agriculture would not be diverted from any studies more useful, for they would probably have finished at their ages, fourteen to eighteen, all the studies named by the objector as the only proper school studies; and if not, eleven-twelfths of each school-day might be devoted to whatever other studies might be desirable, as their recitation in agriculture need not occupy more than half an hour, and seldom as much, any day of the term. Then again, his next objection as to the incompetency of teachers is, in this case, as it would be in a majority of cases, utterly invalid and inapplicable. And his last objection as to want of intelligence and want of time does not apply at all to the case supposed, as the boys have already mastered all the usual school studies, and are devoting their last winter's attendance at school, perhaps, to the study, with their mates, of the facts and principles of chemistry and other natural sciences which serve to explain or elucidate the operations to which they intend to devote their lives.

Should this article come under the eye of any teacher who may be requested to take charge of a class in agriculture, we would suggest to him that in addition to recitations from a text-book, he would give interest to his instructions if he would go over all the principal operations of a farm in regular order, and explain the reasons for the more common practices or methods adopted.

MORE ANON.

P. S.—The time at my command has compelled me to write with less fullness than seemed desirable, not only on the present occasion, but on several others, as, for example, in my first notice of Mr. WHITE'S article on Mental Culture. On looking over what I have written above, I have felt that my effort to make future discussion as to school studies and agriculture as a school study more pointed, practical and profitable, might be more sure to accomplish the object, if the questions or points at issue were *more plainly* stated than they are in the case which we have sketched as one quite likely to happen. Let it be observed, then, that the questions of the greatest importance in such a case would be these two:

1. Would it be wise, proper, expedient or otherwise, if certain of the parents in any school district should desire and request that their sons, after completing the usual course of school studies, should unite as a class and recite in agriculture? Would not such a study be more useful than that of algebra or astronomy, or geometry or rhetoric, or some others attended to by the more advanced pupils? Is there any good reason why such a desire should not be entertained, or such a request be made?

The above questions are for the parents themselves to determine. Having determined that a class in agriculture might be proper and profitable, and having found a qualified teacher, the proposed innovation would bring up this question, for the school officers or the whole of the patrons to determine, viz.:

2. Is there any good reason why the proposal of a class in agriculture should be objected to or opposed by any portion of that school district? Why should not half an hour be occupied with agriculture as well as with algebra?

THE EYE OF THE CRAB.

A creature that depends upon its own exertions to capture the active prey upon which it feeds, must necessarily be furnished with powerful eyes, which are capable of extending the faculty of vision over a very large field. These eyes are seen on the front margin of the crab, placed on footstalks, and having a peculiar nacreous lustre on their grey-brown surfaces. On examination with a good pocket lens, the eyes are seen to be compound, i. e., formed of a great number of facets, each possessing the power of vision, and all communicating with their common optic nerve. The delicate raised lines caused by the serried ranks of these compound eyes are the origin of the peculiar lustre just mentioned. It will be seen, too, that the visual portion of these organs passes partially round the footstalks, so that when the creature protrudes its eyes, it can see objects on all sides with equal ease. Now, replace the crab in the water, and watch it as it exhibits the instinct which has been implanted in its being by its Maker. Advancing with the flowing tide, and ever remaining within a foot or two of the edge, the crab keeps its eager watch for food, and suffers few living things to pass without capturing them. The whole nature of the animal seems to be changed while it is seeking its prey. The timid, fearful demeanor which it assumes when taken at a disadvantage wholly vanishes, and the apparently ungainly crab becomes full of life and spirit, active and fierce as the hungry leopard, and no less destructive among the smaller beings that frequent the same locality.—*Once a Week.*

LITTLE HUNGRY MINDS.—If there is one lesson we would impress upon parents, it is this: Don't stifle your children's desire at proper times to ask questions. This involuntary self-educating process of the child's is of more importance to its future than many parents are aware of. It sometimes, nay, often, costs an effort to break up a train of thoughts in which you may be interestedly occupied, but it will pay. Like the sticks and straws which the winged bird bears long distances in its bill to construct its nest, these tender twigs of information may be worked into a structure which will afford comfort and protection from many a life-storm, a safe retreat for quiet reflection when the spirit of evil is prowling about for careless stragglers, who are beating the air because there is nothing else left for them to do. Don't turn your child away with a lazy, fibbing, abstracted "I don't know." Rouse yourself, and give him food for thought in your answer, or that spirit of evil may take possession of the apartment which you are to furnish.

For the New England Farmer.

NORTH FRANKLIN (Me.) AGRICULTURAL SOCIETY'S SHOW AND FAIR, 1862.

MR. EDITOR:—Perhaps some may think that the shows and fairs of a society out of your State do not come within the circle of those to be noticed by you, but as your organ—the *Farmer*—claims to belong to New England, so here is a general notice of our society, in short; but first, a few words on sundry agricultural topics.

There are croakers and growlers all around who do not take any active part in agricultural societies, do not try to aid and encourage those who do, but cry out against them, saying they will all run down; and in every way, almost, try to discourage the farmer's festivals, by the cry of wasted and wasteful appropriations, yet are ready to draw a few dollars out of the treasury, when opportunity occurs, so freely thrown out.

On account of the inconvenience of driving stock twenty to forty miles to the Franklin Society, ten years ago a wing was clipt off, and the North Franklin Society was formed, to be held, alternately, at Phillips and Strong. At the organization there were but one hundred and fifty-seven members; but little of the improved stock of all kinds, and but little desire for, or appreciation of, any particular kind. Oxen at maturity, girding six feet, six inches, were considered more than an average. Sheep shearing two and a half to three pounds were satisfactory, whether it was wool or hair.

But the influence of this society, and others, has been such that, right in the midst of this terrible war, we have had one of the best shows yet. It has been a continual improvement from the first, except when the weather has been unfavorable, and then the signs of improvement could be seen.

Now, oxen, to be good ones, must be well mated, kind, smooth, handsome and plump; seven feet at four years old; and sheep to be called a good flock, must average over four pounds, lambs and all, of good, fine, well washed wool, while some are set down at seven pounds per head right through the flock. Said an extensive wool buyer to me, the average of the fleeces are more than a pound more than ten years ago, and he had bought for over twenty years in the same towns.

Mr. A exhibits a fine calf, cow, bull, oxen, sheep or buck with his half-dozen lambs, which every one wants to buy, and Mr. B sees that all are going to look at Mr. A's, and the committee award the society's first premium with a thank you for introducing such valuable blood stock into the limits of the society, and he goes and procures some kind of valuable stock, and in return receives his thanks.

The good things growing out of agricultural societies, where peace and unity prevail, are so rapidly multiplying in my mind's eye that this notice must be at once brought to a close, lest an enumeration of some of them should be attempted.

O. W. TRUE.

Elm Tree Farm, Franklin County, Me.

FARM BUILDINGS AND FENCES.—If any of our stock need shelter during the winter season, it is our sheep. It is almost a crime to withhold from them [illegible] ample shelter during our inclement season. With their wool, constantly soaked, and frequently frozen, it is impossible for them to thrive, no matter how well they are fed. Warm shelter will save a vast amount of food. Stock well protected from the storms and cold does not demand near the amount of food that it would, if exposed. Life is from heat, and just in the measure that warmth is withheld, just in that measure is life stagnated, and when it is entirely absent, death supervenes. But not only do sheep need shelter, but they demand good shelter. It must not be close or damp—it must be airy. In this climate, we believe that sheds for sheep would be best, and on high ground, and without having the sides enclosed at all, or if any, only on the most exposed side.—*Oregon Farmer.*

ESTIMATING THE CAPACITY OF BARNS.

Very few farmers are aware of the precise amount of shelter needed for their crops, but lay their plans of outbuildings from vague conjecture or guessing. As a consequence, much of their produce has to be stacked outside, after their buildings have been completed; and if additions are made, they must be put up at the expense of convenient arrangement. A brief example will show how the capacity of the barn may be adapted to the size of the farm.

Suppose, for example, that the farm contains 100 acres, of which 90 are good arable land, and that one-third each are devoted to meadow, pasture and grain. Ten acres of the latter may be corn, stored in a separate building. The meadow should afford two tons, per acre, and yield 60 tons; the sown grain, 20 acres, may yield a corresponding bulk of straw, of 40 tons. The barn should, therefore, besides other matters, have a capacity for 100 tons or over one ton per acre as average. Allowing 500 cubic feet for each ton, (perhaps 600 would be nearer,) it would require a bay or mow 40 feet long and 19 wide for a ton and a half to each foot of depth. If 20 feet high, it would hold about 30 tons. If the barn were 40 feet wide with 10 feet posts, and 8 feet of basement, about 45 tons could be stowed away in a bay reaching from basement to peak. Two such bays, or equivalent space, would be required for the products of 90 well cultivated acres. Such a building is much larger than it usually allowed; and yet, without it, there must be a large waste, as every farmer is aware who stacks his hay out; or a large expenditure of labor in pitching and repitching sheaves of grain in threshing.

In addition to this, as we have already seen, there should be ample room for the shelter of domestic animals. In estimating the space required, including feeding alleys, &c., a horse should have 75 square feet; a cow 45 feet; and sheep about ten square feet each. The basement of a barn, therefore, 40 by 75 feet in the clear, will stable 30 cattle and 150 sheep, and a row of stalls across one end will afford room for eight horses. The 30 acres each of pasture and meadow, and the 10 acres of corn fodder already spoken of, with a portion of grain and roots, would probably keep about this number of animals, and consequently a barn with a basement of less size than 40 by 75 feet would be insufficient for the accommodation of such a farm in the highest state of cultivation.

TILLING ORCHARDS.

The question is often asked, "Ought orchards to be tilled?" Our reply is, *Yes*. The principal objection, we believe, is, that no crop will remunerate the cost of cultivation, and that the time and capital expended upon it is nearly a dead loss. Corn, and even potatoes, which require sunshine and a free circulation of air, generally fail in productiveness when planted in orchards, and as they are strong feeders, have rather an exhausting effect upon the trees; but there is no doubt that the loosening and stirring of the soil is a great advantage, as it lets in the dews and rains, and tends to augment the supply of nutrimental matter contained in the soil.

Some persons have recommended cultivating orchards in peas, oats, turnips, cabbages, beets, &c., and in many cases which have fallen under our observation, these crops have succeeded well. The primary object, however, is to impart new energy to the trees. All the farmer realizes from his crops in this case, should be set down as clear gain—as a recompense for the labor bestowed upon the soil for the benefit of his trees.

Allowing orchards to become swarded over with a thick set and vigorous turf, and to remain in this condition for years, while at the same time, perhaps, the tops are neglected, is a most effectual mode of ruining them. No grass should be allowed to grow for any considerable length of time, around the trunk of any tree, fruit or ornamental, if health, fruitfulness and a good development are desirable.

Where trees have not been liberally manured, it would be about as good policy to sow grass seed in the corn field as in the orchard. But where manure *has been* liberally applied and the trees have made a rapid growth of wood, but do not fruit, laying the land to grass for two years will check the exuberant growth of wood, and bring the trees into bearing. At the end of two years, a shallow plowing, and the land again *seeded with clover*, will be a profitable operation.

Lime and ashes, with a horse load of clay to each tree, if the soil be of a light or sandy texture, will be found an excellent top dressing for most fruit trees.

There *is* danger of manuring apple orchards *too much*. If green manure is applied in large quantities, the trees will be forced into a rapid and unnatural growth; they become tender, the wood is not fully ripened, the bark turns a reddish-brown color, is separated in some places from the wood, and in a few years the whole orchard dies prematurely of the *gout!* If apple trees make an annual average growth of ten to fifteen inches, it is enough. When that is the case the new growth will be thoroughly ripened, and the whole action of the tree will be natural and healthy, and the orchard will be established with a permanent and prolific character.

For the first ten years,—if we are contented with a moderate and healthful growth,—the land may be cropt so as to pay a fair profit on all the labor bestowed to produce it, and also on that given to the cultivation of the trees. It should not be devoted to the small grains, however, but to any of the hoed crops, corn, potatoes, beans or roots. Under this practice the cultivation of an orchard is done at little or no cost.

For the New England Farmer.

THE BIRDS OF NEW ENGLAND---No. 25.

SNOW BUNTINGS—SPARROWS.

Snow Buntings—Lapland Longspur—Savannah Sparrow—Bay-winged Sparrow—Yellow-winged Sparrow.

The SNOW BUNTING, (*Plectrophanes nivalis*, Meyer,) is a not uncommon and often familiar winter visitant from the North, inhabiting the whole northern part of the continent, from the Atlantic to the Pacific, and spreading far southward into the United States in the snowy season. A few stragglers are sometimes seen in this State before the close of October, but they are not generally observed in numbers till after the fall of severe snows, when small roving parties are seen gliding over the country in search of food, flying in close bodies, and whirling, with amazing swiftness, from field to field. Many remain in the New England States throughout the winter season, visiting such places as best suit them, being abundant and familiar in some sections, gathering the crumbs about the farmer's door, while in others they are comparatively rare, shy and distrustful. In summer they are chiefly confined to the regions near the Arctic Circle; and being common to both continents, in winter, millions descend southward over portions of Europe and Asia, where many are killed for food by the inhabitants.

Nuttall says, "In the dreary wastes of Greenland, the naked Lapland Alps, and the scarcely habitable Spitzbergen, bound with eternal ice, they pass the season of reproduction, seeking out the fissures of rocks on the mountains in which to fix their nests, about the month of May or June;" and it is in these barren tracts, he says, that they "waste the sweetness of their melody, unheard by any ear but that of their mates." A few breed in New England, their nests having been repeatedly found among the declivities of the White Mountains in New Hampshire. The food of this species consists of seeds chiefly, and various species of insects.

The Snow Bunting is seven inches in length, and twelve in alar extent. In summer, the colors of the adult are pure black and white; in winter, varied with black, rufous, and white.

The LAPLAND LONGSPUR, (*Plectrophanes Lapponicus*, Selby,) like the bird just described, is a common inhabitant of the extreme northern parts of both continents, in winter migrating southward, at which season it often enters the United States; but it is much less common than the Snow Bunting. It is a beautiful species, and in habits nearly agrees with the bird above de-

scribed. Richardson believed many of those inhabiting America spend the winter along the shores of Lake Huron and Superior. "They breed," he says, "in the moist meadows on the shores of the Arctic Sea." The nest is placed on a hillock of moss and stones, and composed of dry grass interwoven to a considerable thickness, and lined with deer's hair. The eggs, generally seven in number, are pale ochre yellow, spotted with brown.

Head, throat and breast, black; lower parts, white; a collar of chestnut back of the neck; rest of the plumage, above, yellowish white, streaked with dark brown. In winter, the colors are much less pure. Size a little less than that of the Snow Bunting.

There are four other species of Snow Bunting, which have more western habitats, embraced in the fauna of the United States.

The next sub-family of Baird, *Spizellanæ*, includes the greater part of our common Sparrows.

The SAVANNAH SPARROW, (*Passerculus savanna*, Bonaparte,) is a tolerably common species over a large part of eastern North America. It arrives here early in spring, and remains till late in October, many passing the winter in some of the Middle States. It is partial to the vicinity of the sea-coast, especially in winter, but in summer is sparingly distributed over the interior, many retiring as far north as Labrador, where Audubon found them in abundance." In the spring and fall I have taken them in the western parts of the State of Massachusetts, in dry, elevated situations, but have found them most abundant in the marshes along the sea-coast, in the latter season, where they run rapidly along the ground, hiding among the grass, and when flushed will fly but a short distance, seeking safety by concealment. Its song is low and short, but agreeable, though nowise noteworthy. Wilson first introduced this species to the notice of the public, but Audubon has given us a more complete account of its history. He says its nest, which is formed of dry grasses, is placed on the ground, at the foot of a bush or rank tuft of grass; that the eggs are four to six in number, of a pale bluish color, slightly mottled with purplish brown.

Length five and a half inches; extent, eight and a half. Upper parts streaked with blackish-brown, rufous, and gray; beneath white, breast and sides spotted and streaked with brown; strips over the eye, and shoulder of the wing, pale yellow.

The BAY-WINGED SPARROW or GRASS FINCH, (*Poœcetes gramineus*, Baird,) is a very common summer inhabitant of our dry fields and pastures, arriving from the Southern States, where it spends the winter, in April, and remains with us till late in October. It has an agreeable song, somewhat similar to that of the Song Sparrow, but less clear, loud and sweet, of which it is not at all sparing during the months of May and June. Frequenting plowed and cultivated fields, it is a common and well-known associate of the farmer throughout his summer toils, breeding on the ground in the pastures, mowing-lands and cornfields, unmolested, except by skunks and predacious birds, which are a great check to its increase. It is eminently worthy of being esteemed a friend, and protected as such, being in no way prejudicial to the interests of the farmer, but feeding itself and young through the summer months on the cut-worm and other destructive insects, subsisting at other times on seeds. It raises two or more broods in a season, laying four or five flesh-colored eggs, which are thickly marked with blotches of several shades of brown.

This species, commonly known as the *Grass Bird* or *Ground Bird* by farmers, is six and a quarter inches in length, and about ten in alar extent. Above, light yellowish-brown, each feather centred with darker; beneath, yellowish-white, breast and sides streaked with brown; lesser wing covert a light chestnut brown; outer tail feathers white. Its habitat extends from the Atlantic to the Pacific, and far to the northward.

The YELLOW-WINGED SPARROW, (*Coturniculus passerinus*, Bonaparte,) is an interesting and unobtrusive little species, and like the one last described, is a common inhabitant of our dry fields and pastures, and though perhaps less known, is hardly less abundant. It seems somewhat peculiar and original in its habits, and I have found it exceedingly interesting. It arrives here about the second week of May, from the far South, and it seems a little remarkable that at the time Audubon wrote its history, in 1835, it had never been seen during its passage through the Southern States, if it passes there, as it seems it must. In the Middle and Eastern States it is generally not uncommon. Its flight is low, short and tremulous, performed by short, rapid strokes of the wings. Its song, which is low, and almost like the feeble chirping of an insect, is repeatedly uttered from a fence rail, dead weed, stone, or hummock of earth, and resembles the syllables *ch' chee'e'e'e'e'e'e*, prolonged for several seconds. What it lacks in melody, it strives to make up in frequency and energy of repetition, and is not at all sparing of its little ditty from the time it arrives in May till July, saluting every passer through the fields as soon as he appears and while he continues in sight, drooping the wings and tail, and erecting the feathers of the back, exerting apparently every power for musical effect. Particularly is this its habit while the female is sitting.

Its nest is composed of dry grasses, and concealed on the ground under a tuft of grass or briar bush; the eggs, four or five or number, are nearly white, sprinkled with ferruginous specks. Two broods are probably raised in a season, as I have found the young in June and eggs freshly laid in August. The nest is not so often found as that of some other Sparrows, though the bird itself be equally numerous.

Length, five inches; extent, eight and a quarter. Above, brownish, each feather margined with ash; beneath yellowish white; band of the wing yellow, the lesser coverts yellow olive.

Cambridge, Mass., 1862. J. A. A.

MORNING AIR.—It is a common and favorite notion with many that the morning air is the purest, most bracing; but the very opposite is the fact. The air is more full of dampness, fog, miasm, at about sunrise, which the sun, however, soon dissipates. Before engaging in anything like exercise or work in the early morning out-of-doors, it is conducive to health to take a warm cup of coffee, if breakfast is not to be had.

For the New England Farmer.

FLAX---BARLEY---WHEAT.

MR. EDITOR:—I noticed in your last *Farmer* an article on the subject of FIax. In 1860 my attention was called to this subject, in reading your paper, and in the spring of that year I sent to one of the seed stores in Boston and procured one-half bushel of the finest looking seeds desirable, at the cost of about three dollars, with all expenses. Trusting to the good looks of the seed, I proceeded to sow it, which I did on the 4th day of May. Whether it was in the quality of the seed, or owing to the coldness of the weather, as the ground was frozen a very little after that time, not one particle of it ever came up. Should I ever "try again," I would not sow until the 20th of May. I might have had two or three quarts of seed of a neighbor, which I knew was good, but as I was in for it, I would try a big gun at secession, and so only had a flash in the pan. The ground on which I sowed my flax was a red, clay loam; afterward, on the 14th day of June, finding the seed had failed, I sowed the same land with oats for fodder, which did well.

There seems to be no question but that flax may be grown on light or gravelly land with the use of plaster. That plaster is good for potatoes and clover on such land we know. You do not tell us whether the flax must be pulled to get two tons of straw per acre, or whether it may be mown, or may be threshed in our common threshing machines, and the straw baled up like barley straw or hay, and then, where we may readily sell it.

The prospect of a scarcity of field help another season may induce many to plant less and sow more. Barley is now the crop here; more than two thousand bushels are raised within two miles, while not one-quarter of that is grown of other sown crops. Barley sold in Sept. for sixty-seven cents, delivered at R. R. stations, (three miles or so.) I raised this year twenty bushels of wheat, on land which was last year in corn. Used lime and plaster on the wheat, put the plaster on the dryest part, and lime on the low places. Wheat did best on the low part, which was tile drained last year. J. W. BROWN.

Kensington, N. H., Nov. 17, 1862.

REMARKS.—We gave all the information we had on the subject of flax. Will Mr. ALLEN, or some other person having the facts inquired for above, communicate them to the *Farmer*?

AMERICAN POMOLOGICAL SOCIETY.—Those persons who attended the annual meeting of this society in September last, will be glad to learn that its Transactions for the year are to be published, and that they will contain *new catalogues of fruits*, together with a list of the various States and districts to which they are best adapted. The society, however, is dependent upon the receipts from members for the funds to publish its Transactions, and it is important that they should be numerous.

We have a circular before us which states that "all persons who are desirous of obtaining these Transactions, are respectfully solicited to become members of the society, by forwarding to THOMAS P. JAMES, Esq., Treasurer, Philadelphia, or to Hon. MARSHALL P. WILDER, at Boston, the requisite fees. Ten dollars constitute a Life, and two dollars a Biennial membership. Life members will be furnished, as far as possible, with the back volumes of the society's publications.

Persons desirous of responding will please do so immediately, that their names may appear in the forthcoming volume."

The society is doing an excellent work, and we hope many persons will find it a pleasure to aid it in its laudable efforts.

BATHS AND BATHING.

A cold bath is 75° and under; temperate, 75° to 80°; tepid, 85° to 95°; warm, 95° to 100°; hot, 100° and over.

The temperature of the body in health is ninety-eight degrees Fahrenheit. For purposes of cleansing the skin, a hot bath is the most efficient, but it should be indulged in only occasionally, and for a very few minutes at a time, as it rapidly exhausts the physical powers. It opens the pores of the skin, and increases the activity of the circulation for the moment, but if followed by an instantaneous cold shower-bath, an invigorating effect is produced. A hot bath excites, a warm bath soothes and tranquilizes; it makes the pulse slower, and causes more equable breathing.

A vapor-bath is of steam, instead of water, and is applied inside as well as out; its first effect is a feeling of oppression, but soon perspiration is induced, and delightful sensations ensue. To prevent taking cold, the person should pass from the steam-chamber into a tepid bath for a single moment, then wipe dry briskly, dress and walk.

No kind of bath ought to be taken within an hour before a regular meal, nor sooner than four hours after; sudden death has often resulted from inattention to the latter. The best time for bathing is immediately after rising in the morning, as then there is greater power of reaction, without which there is no invigoration, no benefit.

The sponge-bath is the application of water to the surface of the body by means of a sponge. When persons are feeble, one portion of the body should undergo the process at a time, then quickly wiped and dried, and covered, before another is exposed. There are few persons indeed who would not be greatly benefited by the following procedure every morning, winter and summer: Wash the hands first in a small amount of water with soap, for if but little is used, a teacupful, it is warmed by the hands, and thus becomes more cleansing, without the trouble of preparing warm water; then rinse them well; afterwards wash the face in a large basin of cold water just drawn or brought into the room, for all cold water becomes filthy in an hour or two, if kept standing in a sitting or sleeping apartment. After the face has been washed plentifully, throw the water up to the elbows, then a little higher at every dash with the hand, until the arms, neck, throat, behind the ears, arm-pits and upper portion of the chest have

been deluged with water; next (except women with long hair,) wash the whole scalp abundantly, rubbing the water into and about the roots of the hair with the ends of the fingers; then wipe with a towel, absorbing as much of the dampness from the hair as possible with an extra dry cloth, and dress, leaving the arrangement of the hair to the last, so as to give it an opportunity of drying somewhat; for if it is wringing wet, it will not dress well, and besides will keep the head cold by its evaporation. In dressing the hair after such a washing of the head, the comb should be passed through it in the gentlest manner, so as to make no strain upon the roots, nor break any hair in disengaging the tangles. The hair thus dressed in the morning will remain so the whole day, or, if not, can be easily re-dressed with the advantage of perfect cleanliness, which cannot be said of the filthy practice of using hair-oils.—*Hall's Journal of Health.*

HOW THE TURKS SMOKE.

The Turks undoubtedly understand how to smoke better than any other nation. They do not seem to be harmed by it, since they live to healthy old age in the constant use of the weed; but whether harmed or not, they evidently excel all other people in the luxury. We have already remarked that the Turk uses a clean clay pipe. He also uses a long wooden stem. This is the important characteristic of the chibouk, and the theory of the thing is this: All woody fibres in burning are decomposed, giving off quantites of water, or of oxygen and hydrogen which compose water. This water passes off in steam or vapor, having in solution the nicotine and other component parts of the tobacco. What is commonly called the "oil" in a pipe is ninety-nine hundredth parts water. It cannot but be evident that this hot water or steam, passing as it does directly from the fire to the mouth when one smokes a short pipe or a cigar, is uncomfortable if not unwholesome. A long wooden stem, three to five feet in length, with a large bore, is therefore advantageous in this respect, that it permits the smoke to rest in the tube some time before it is taken into the mouth. It deposits its steam, and a large part of the nicotine, in the wooden tube, and the smoker takes into his lips a dry smoke. The Turks clean these stems daily with strong coffee. They prefer the wood of the jessamine or the wild cherry to all others, although they make pipe stems of every wood. Indeed, it is not uncommon for a luxurious Turk to send out for the branch of a large rose bush, have his servant bore the stem with the ever ready gimlet and string, and then hand the pipe to his guest blooming with fragrant roses. Jessamine and cherry stems cost in the Turkish bazaars from one to ten and even fifteen dollars each. It is on the stem and mouthpiece that the expense is wasted. The amber mouthpiece is itself costly, choice amber, milky and delicate in color, being worth almost its weight in gold in Oriental countries, and the mouthpiece is ornamented with jewels, according to the wealth of the proprietor. Thus a mouthpiece worth ten or twenty thousand dollars may be frequently seen, while the bowl of the pipe is worth but a tenth of a cent.—*N. Y. Journal of Commerce.*

For the New England Farmer.

ESSEX COUNTY SHOW.

As your correspondent "Georgetown" has done me the honor of so conspicuous a notice in your paper of the 22d inst., it may be expected that I should make some reply. I confess to have been misled, at the first glance, by the signature to the article. But on a re-examination, it savors so strongly of the shore of the sea, that I am confident it never could have originated from the heights of G. Far be it from me to under-rate any of the advantages of this locality; remembering it as I do for many years, I am satisfied it is not a desirable place for our Show. My only desire is to secure such a place as will best advance the general object of the Society. And least of all, do I want its exhibition near "my own house," never having had "any axe to grind on such a stone."

"Georgetown" will probably modify his remarks when he learns that I made no assertions whatever about the Show, but only gave impressions. My impressions of the field used for plowing were derived from the report of the committee on single teams, the chairman of which, (and no one will question his competency for judge of it,) said, it was the worst field he ever knew used for such a purpose. My own impressions were taken from this remark, and what I saw standing on the gravelly knoll spoken of. As to the animals exhibited, or the fruits presented at the hall, I confess I did not see either of them, nor was I present when the report spoken of was adopted.

The Trustees of the Society have determined to hold their show at Andover the coming season. They saw no good reason for deferring a show. They believe the demand for the products of the field and the stall are as great now as at any other time; in fact, greater, as the number of laborers are diminished, by the number of those called away to the field of battle, all of whom have to be fed by what is grown at home. Some have speciously argued it was no time to cultivate the arts of peace, when war is raging. I look upon war as a grievous calamity, the influences of which should not be extended beyond the narrowest possible bounds, especially the domestic strife that now prevails, originating in the basest of purposes and continued for the vilest ends. My best hope from it is, the absolute annihilation of involuntary servitude, even if its abettors have to share the same fate. P.

Essex County, Nov., 1862.

SAW-DUST FOR STABLES.

One of the papers reports Dr. Dadd as objecting to the use of dry saw-dust as a litter for stabled horses, on the ground that it absorbs the natural and healthy moisture from the hoof, and renders it brittle and dry, and so leads on to cracked and contracted feet, to corns and similar diseases. I had supposed this "eminent veterinarian" too sensible to hold such an opinion.

If the pores of a horse's foot were open and coarse, say like a piece of sugar or a sponge, the saw-dust might absorb moisture from them injuriously. If I lay a sponge on my hand, it does not take up its moisture. If I spread saw-dust on my hand, it will absorb whatever perspiration or other

wetness there may be on the skin, but it will do nothing more. So saw-dust will take up whatever liquid manure there may chance to be on the floor of the stable, but it will not suck moisture out of the horse's hoofs. In my own practice, I have long used saw-dust to keep the horses' feet moist, though I do not, for this purpose, use the dust in a *dry* state. I spread it over the entire floor, two inches thick, sprinkling that which is under the fore feet with water, just enough to keep it moist. The dust under the hind feet gets moistened in other ways. By this means the hoof is kept soft and moist, almost as much so as if the animal were running at large in a pasture. Of the valuable liquid manure saved in this way, I need not now speak.—*American Agriculturist.*

PAPIER MACHE.

Papier mache is not always strictly mashed paper—however it may be occasionally—neither can it be uniformly designated as a composition, especially in the production of finer ornamental articles. When consisting of the pulp of paper, boiled with glue or gum arabic, &c., the cheaper articles are made from it, but the better ornamental work is made by causing sheets of paper to adhere, or to be consolidated together in any required thickness. The pulp is rendered nearly water-proof by uniting with glue a preparation of sulphate of iron; and almost total incombustibility is secured by combining with the water-proof pulp, phosphate of soda and borax.

All present diversities of papier mache manufactures may be comprehended and classed under five divisions: 1st, fibrous slabs made only with coarse fibre mixed with earthy matter, then, after the addition of a cementing size, the whole is well kneaded together with the aid of steam—with the proper ingredients, the substance is made fireproof; 2d, sheets of paper pasted together upon models; 3d, thick sheets of boards produced by pressing paper pulp between dies; 4th, carton pierre, prepared from paper pulp, or paper mixed with whiting and glue, pressed into plaster piece moulds, backed with paper, and when sufficiently set, hardened by drying in a hot room; 5th, Martin's ceramic papier mache, consisting of paper pulp, glue, rosin, sugar of lead and drying oil, mixed in certain fixed proportions and kneaded together. It can be kept in a plastic condition for half a year by keeping the air away, and kneading the mass occasionally. The composition was patented in England in 1858.

GLUE FOR READY USE.—To any quantity of glue use common whisky instead of water. Put both together in a bottle, cork it tight, and set it for three or four days, when it will be fit for use without the application of heat. Glue thus prepared will keep for years, and is at all times fit for use, except in very cold weather, when it should be set in warm water before using. To obviate the difficulty of the stopper getting tight by the glue drying in the mouth of the vessel, use a tin vessel with the cover fitting tight on the outside to prevent the escape of the spirit by evaporation. A strong solution of isinglass made in the same manner is an excellent cement for leather.

For the New England Farmer.

TRUST.

"*Perfect love casteth out fear.*"—1st JOHN 4: 18.

In the arms of my Father
As a child, trustingly I'll lie,
For I know He careth for me,
He will listen to my sigh.
He is like a tender mother
In his gentle, watchful love;
"He is nearer than a brother,"
While He bears my soul above.

When the storm clouds darkly gather,
And the thunder mutters deep,
Then I'll think how great a Father,
Condescends to guard my sleep;
And I'll nestle closer to Him
While the forked lightnings gleam,
And serenely lean upon Him
While I watch their fitful beam.

He'll not cast me from Him mourning,
For "He hears the ravens cry;"
He'll not leave me sorrowing,
For He stoops to such as I;
And unless His love permits it
Not a harm can come to me,
So why should I not trust it
When He such a friend can be?

O, how sweet to trust all with Him,
Both the future and the past,
Knowing while *earth's* loves grow dim,
His will brighten to the last;
Light us through the narrow valley,
Cheer us up the steep ascent,
Help to make the millions rally
O'er the path the Saviour went.

Harvard, Sept., 1862.

PRUNING FOREST TREES.

In some notes of "an Agricultural Excursion" by the editor of the *Maine Farmer*, we clip the following item:

"Near South Paris we passed a wood lot of several acres in extent which had recently been trimmed and pruned. The pruning of forest trees has not been so largely practiced in this country as in England, and many of our farmers are opposed to the plan. But it is evident that trees are weakened by growing in a crowded situation, and thereby become more liable to decay and to the attacks of insects, and if thinned out the air and sun are admitted and a more hardy and vigorous growth is obtained. We know of several wood lots where it is the practice of the owners, not only to cut for fire-wood in the fall such trees as are being crowded in their growth and are beginning to decay, but to prune in the spring such trees as need to have their superfluous limbs removed. By these methods the wood-lot gains in value, while an annual supply for the fire is cut out each year. Some experiments tried in England to illustrate the advantages of early and annual pruning of forest trees, gave most gratifying results. An oak of three feet in height planted in 1805, had in 1832 (a period of growth of 27 years) attained a circumference of 21 inches; a beech of 3 feet 9 inches high, had a girth in the same period of 27 inches; an elm of 3 feet 10 inches had increased to a circumference of 32 inches; and an Italian poplar of four feet, reached a girth of 44 inches.

WESTFORD ACADEMY.

The autumnal term of this old and time honored institution closed with the examination on Tuesday, 25th ult., and sustained the reputation which it has so long held for thoroughness in whatever it undertakes. One of the pleasing features of this examination, was the recitation of a class in agriculture, the first we have seen. The class had gone over but a few pages of the Manual, but brief as it was, the class had stored up more ideas that will aid in the practical duties of life, than in any other recitation to which we listened of four times its length. We believe this study will prove something like the introduction of music into our schools. It is so pleasing, that, like some healthful condiment with one's dinner, it will aid, rather than retard, other studies.

Westford Academy was founded in 1792, with the object "to encourage the means of all useful science and literature, and render the instruction of youth as free and little expensive as possible." It has a fund of some $30,000, the income of which is employed to meet a certain portion of its expenses, so that the cost to pupils is comparatively low. "The Academy is located in Westford Centre, eight miles from Lowell, on a height of land commanding an extensive prospect of beautiful natural scenery. The town is remarkably free from everything which can tempt the young to evil habits and neglect of studies; and is easy of access from all directions, by railroad." Every study necessary to fit pupils for college is taught in the school, and it probably has as many graduates who are useful and influential persons of both sexes, as can be found from any other similar institution in the State.

Below we give a list of the present

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LARGE DEPOSIT OF HONEY.

A somewhat singular discovery was made in a house in St. Louis. The *Argus* gives the following account of the story:

The inmates of one of our largest up-town mansion houses, a few days since were surprised to find a large number of bees flying about in two of the upper rooms. As the little fellows continued to occupy the places, a bee naturalist was sent for to investigate. On entering the rooms he exclaimed: "You have honey somewere here," and proceeded to search for it. On removing the fire-board, he discovered that one flue of the chimney was full of honey-comb, which was hanging down into the fireplace, and the honey dropping from it; proceeding to the top of the house to sound the chimney, he found it the same; one flue of the chimney was full, and the bees were industriously at work there also. These flues of the chimney had never been used; they were plastered smooth inside, and were perfectly dark, a stone having been placed on the top of each flue. The bees had descended the adjoining flues, and found small holes about ten inches from the top of the chimney, leading into the closed flues, and through these holes they had made their way in and out. They have, as is supposed, occupied these places for three years, having been kept warm in the winter by the heat from the adjoining flues. On removing the fire-board, the bees, seeing the great light which had broken in upon them, descended to the room and gathered on the windows, until they were covered to the thickness of three inches. It is estimated that there are in the two flues from 40,000 to 50,000 bees, and from 2000 to 3000 pounds of honey.

For the New England Farmer.

KINDNESS TO ANIMALS.

It is pleasant to notice the increased attention paid by farmers generally to the comfort of stock. And at this season, when flocks and herds are gathered in from the hills and meadows where they have been grazing in comparative independence, and for months to come must be thrown on the tender mercies of their owners for subsistence, it is a relief to know they will be in general well cared for. Snug shelters and warm stables await them, and the prospect of exchanging green pastures for winter quarters is any thing but dismal. Their food, too, is so contrived as to make the change less violent than it used to be. Milch cows, for example, are not compelled to reduce their supplies for want of something to promote their milky secretions; but the transition from green to dry fodder is made easy and natural by roots and the like. The mild, sunny pasture-season is almost prolonged till the time of the year for it comes round again, by light, cozy stalls, where they can ruminate and wax fat without kicking.

Does not the faithful beast of draft and burden especially appreciate the kindness of his master during the season when he is usually most at leisure to enjoy it? How he "feels his oats" and the curry-comb, and how genially he whinnies recognition of the familiar step and call. And when led out for a drive, he can hardly contain himself for joy at the chance of thus serving his kind proprietor. But the younglings are naturally the pets of the farm, and at the closing in of the cold term, almost any heart will warm toward them. It is not one cosset calf or lamb that is to be singled out, but all come in for their share of the comforts provided. One may be scrawny, another backward in development, but it is more his misfortune than fault, and so he shall not be slighted and abused for what he can't help. On the other hand, such cases sometimes call out the more sympathy, and it is curious to see how the poor, little lagging ones pick up pluck and flesh, now and

then, under careful treatment, and even come out first where they went in last.

Every farmer finds, sooner or later, that it pays to care kindly for his live stock. He realizes that there is less waste of fodder when it is intelligently adapted to the animal's wants, and less required to supply them when comfort is consulted. He has not to keep piling up fodder to enable his horse and cow to thaw the cold out, for he had early taken the precaution to let as little of it in as possible.

A merciful man, however, is not invariably merciful to his beast. But the exceptions result more from thoughtlessness than deliberate intention. You may find a good, clever fellow, who would no more think of violating the statute against cruelty to animals, than that against housebreaking. He would no more be seen knocking down his horse than his neighbor, and yet, were his dumb beast gifted like a certain one we read of, he might as plainly rebuke his master. The man perhaps has been in the habit of thinking, from his childhood up, that domestic animals, like wild ones, can shift for themselves—or he may imagine that some, besides chameleons, can live on air—or that others, besides those starved army horses which recently are said to have devoured a thousand dollars worth or so of lumber, can subsist on "post-fodder."

Then, again, no doubt, there are some naturally kind persons who live under the delusion that kindness to brutes of any sort is like pearls cast before swine; they won't appreciate it. But the same rule applies to their own species. They will find certain of their own fellow-mortals, who are no more susceptible, apparently, to the law of kindness than so many brutes. But the trouble is, such have been so neglected or maltreated, at one time and another, that they have come to understand only the language of hard knocks and frowns; and it is somewhat thus with their fellow-unfortunates a little lower in the scale of creation. Cannot both, however, be won over by patient, kindly painstaking?

The skinflint, who grudges himself and family the food and raiment they need, will of course begrudge his other live stock their necessaries of life and health, but, as has been before intimated, he stands in his own light, for kindness, as well as honesty, is the best policy all round. And what shall be said of the absent-minded man, whose thoughts and wits are anywhere and everywhere, but about their owner? He bowls ahead like Jehu through thick and thin, holding the reins, and laying on the lash mechanically, until some sudden splash or jolt rouses him to consciousness of his whereabouts, and he makes what amends he can. When he gets home, he unharnesses the reeking, jaded nag, and if he don't forget to feed and water him, it is very apt to be because the hungry, neglected brute makes his wants known so loud and strong, that the absent one is recalled to his sense of duty in spite of himself. Then it is really comical how repentant and apologetic he is sometimes to the offended beast, and promises never to be so overtaken again—only he can't stick to the pledge.

It is a significant fact, that two most popular foreign authors of the day are specially noticeable for their fondness of animals. And another equally eminent, though perhaps less popularly known, has gone so far as to discover in every animal's eye some intimation of humanity. Beecher, also, said in a recent sermon, that "beasts are much more moral than men generally are;" and, indeed, there seems to be a growing disposition to accredit animals with something higher than mere instinct. Is not this, after all, the surest and strongest claim they have to our kindness? Whatever be our speculations, like brutes they will ever live and die, but their conditions of life and death will be much relieved in proportion as they are appreciated.

It is also an encouraging circumstance that public sentiment bears down with almost the force of law upon the cruel master, whether of man-servant or brute. The wilful transgressor in this respect will surely have the finger of scorn pointed at him, if not a sharp stick thrust nearer. And the unconscions, careless offender will be pitied almost like the man who needs a guardian.

The cosset lamb may be a plaything for the child, and the sucking calf or pig its natural pet, but no man need be ashamed to own his pets of the farm, nor think it but boy's play to encourage their caresses. And in studying their comfort and enjoyment, he is but obeying the will of Him who causes the grass to grow for the cattle, and feedeth the young ravens when they cry. W. E. B.

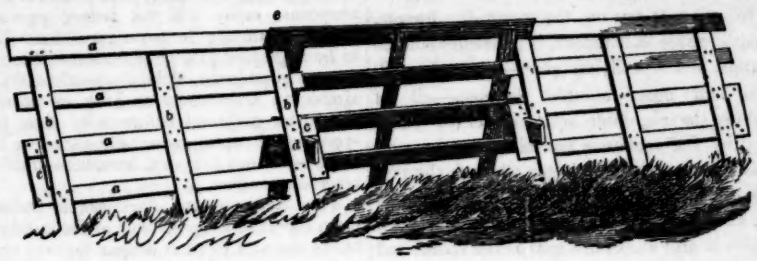
Longmeadow, Nov., 1862.

A WORD ON THE TOAD.

The beautiful eye of the toad is proverbial, redeeming the ungainliness of its general aspect, and having in all probability given rise to the fabled jewel within the head. Bright and richly colored as is the eye, with its round, bold, fiery, chestnut hue, it is without the least vestige of expression, and retains its full brilliancy long after the animal is dead. As to venemous powers of the toad, they are not to be found in his mouth, as is popularly imagined, but in two rather large glands on the sides of the head, which project boldly, and are plainly visible. If one of these protuberances be squeezed between the fingers, a whitish creamy-looking liquid will be ejected, and perhaps to some little distance. While performing this operation it will be well enough to hold the toad in such a manner that the secretion may not be shot into the eyes, as in that case it would cause severe pain, and might probably produce violent inflammation. Still, it will not be ejected without the employment of considerable force, and is never injurious to human beings. Briefly to sum up the character of the toad—it is not pretty, is entirely harmless, extremely useful, easily tamed, and worthy of being cherished by those who prefer deeds to outward seeming; it is a creature of curious and interesting habits, and affords a rich field to any one with time and opportunity, for clearing up several important but disputed points in physiology.—*Once a Week.*

SOLVENT FOR OLD PUTTY AND PAINT.—Soft soap mixed with solution of potash or caustic soda; or pearl ash and slaked lime mixed with sufficient water to form a paste. Either of these laid on with an old brush or rag, and left for some hours, will render it easily removable.

R. A. SMITH'S PATENT FARM FENCE.



We have frequently during the few past years had occasion to call the attention of our readers to some new plan of farm fences, and this week we present one patented in March last by Mr. R. A. Smith, of Newburyport.

We have only seen it in model, and cannot, therefore, say as much as we might of its practicability. The cut gives a good representation of it, and scarcely needs any description. The fence is madé entirely of one kind of stock, the uprights being of the same size as the rails.

The alternate sections lean in opposite directions, causing the fence to spread about two or two and a half feet on the ground, but giving it great strength and stability. It seems to possess these qualities in a great degree.

We give a description of its construction, and for fuller information refer the reader to an advertisement in the columns of this paper.

The above cut represents three sections of the fence set up. In section No. 1, the letters *a a a a*, represent the rails as fastened to the posts *b b b*. The mortise for the cross-bars are shown at *c c*. To set up the fence, take two sections and set as represented in the cut, at such an angle that the upper and second rails shall interlock each other on opposite sides of the uprights as at *e*; then press in the lower ends of the uprights, and put in the cross-bar *d*. This cross-bar, which is made to pass from mortise in section No. 1, to mortise in section No. 2, if properly fitted, holds the bottom of the sections from spreading, as when the fence spreads the lower and second rails bear on the cross-bar edgewise, so that the cross-bar holds the sections, and the sections hold the cross-bar, making a complete dove-tail,—thus making a strong, light and cheap portable fence.

WHISKY AND NEWSPAPERS.—A glass of whisky is manufactured from perhaps a dozen grains of corn, the value of which is too small to be estimated. A pint of this mixture sells for one shilling, and, if of a good brand, is considered well worth the money. It is drank in a minute or two —it fires the brain, sharpens the appetite, deranges and weakens the physical system. On the same sideboard upon which this delicious beverage is served lies a newspaper. It is covered with half a million of types—it brings intelligence from the four quarters of the globe. The newspaper costs less than the glass of grog—the juice of a few grains of corn; but it is no less strange than true that there is a large portion of the community who think corn juice cheap and the newspaper dear!

LIME---ITS USES AND ITS ACTION.

Many farmers appear to doubt the utility of lime in agriculture. Yet no fact is more incontrovertibly demonstrated by science, than that lime is indispensably necessary to the development and even existence of both animals and plants; and as it is detectable in the organized structure of the latter, there is a necessity for its existing previously in the soil, or for its being supplied, artificially, as manure.

Chemical analyses have demonstrated that in every one thousand pounds avoirdupois of the following materials, the quantity of lime is as follows:

	Wheat.	Barley.	Oats.	Potatoes.	Turnips.
One thousand pounds of	1	1.0	0.9	0.3	0.8

The very limited quantity of lime, however, which these vegetables contain, ought by no means to be regarded as a criterion in determining the quantity to be applied to the soil. The action of this important mineral is to be developed in other ways than that of merely affording a necessary ingredient to plants, and is cognizable in a variety of modes, both as regards its effects upon the mineral and vegetable substances contained in the soil, and, indeed, upon the physical character and construction of the soil itself. When applied to tenacious clays, it induces relaxation, renders the soil light and friable, and corrects its acidity by its alkalescent action upon the native

acids, which it neutralizes and converts into manure. On sandy or arenaceous soils, its action is strongly binding; rendering the texture more compact and compressible, and neutralizing the salts of iron which generally operate as a noxious influence upon both the soil and its produce.

By the action it has on the vegetable *humus*, and other organic substances, it generates soluble compounds, and fructifying gases—carbonic acid, ammonia and other soluble products—all of which assist the vegetable action either by being absorbed by the moisture contained in the soil, and thus entering the circulation through the medium of the sap in conjunction with the humate of lime, and other principles, or by being absorbed by the leaves and stalks in a gaseous or volatilized state.

It possesses also the power of decomposing alkaline silicates, with several valuable and highly efficient salts, and by this means of rendering them appropriable by plants,—also of supplying alkalies to the sap, without which, in some quantity, the vegetable would cease to grow, and even to survive.

Again, lime disposes the soil to absorb oxygen from the atmosphere, and by its strong chemical affinities, it effects a variety of useful combinations and decompositions, thus inducing chemical activity, and the evolution of electricity, one of the most efficient and powerful agents known in nature.

In all composts there should be more or less lime used, according to the character of the soil to which it is to be applied,—but used in a mild form, unless applied to heaps of crude materials.

KEEPING FRUIT THROUGH WINTER.

How to ripen fruits, is a branch of pomological knowledge as important as how to grow them; yet it is one very little understood. It is questionable whether this knowledge can be taught; for experience shows that no rule is applicable to all varieties alike—for some apples and pears are improved by being taken off the trees before they are ripe, while other kinds are best when left on the tree as long as possible.

With regard to apples and pears—kinds of fruit most generally understood when we talk about preserving fruits—the fall fruits, for the most part, are best gathered a few days, or, it may be, a week, before they would drop of their own accord from the tree; while others ripening at the same season are best left on until they will scarcely bear their own weight without falling. The Bartlett pear, for instance, may be gathered at least two weeks before apparently ripe, and will mature well in a cool, shady place, and, to some tastes, be even better for it; while the Duchess d'Angouleme is ruined by what, in the same instance, would be called premature gathering. All these nice points have to be practically determined—and the only safe general rule can be given, that when a fruit will part readily from the tree when gently lifted; or, when the seeds inside are of a deep black color, the crop may be gathered and stored away.

In most cases, by far too many fall-ripening varieties of fruit are planted. If the orchard be intended to supply family consumption, the crop will not keep till all is used; and if for market purposes, many will rot before purchasers are found for them; or more important duties have to be neglected to give attention to them. Where a great abundance of fall fruit exists, and it is desirable to keep them as long as possible, they should be gathered before fully ripe, just as the seeds are changing color, and kept in a cool, dark room—one not too dry, however—until they can receive attention.

This coolness and darkness is moreover the main secret of keeping fruit of the winter ripening kinds through to their proper season; and it is in endeavoring to find the exact conditions, that so many fail. If too dry, they shrivel—if too hot, they prematurely ripen, and are worthless—if too damp, they rot; and if too cold, they are tasteless and insipid. To just hit the mark is not easy to a beginner, and yet in practice it is found—not so difficult as it appears to be. Some house cellars are so constructed as to be just the suitable thing; but the majority usually border on some one of the extremes we have noted.

Probably the best plan for the apple, where the fruit is perfectly sound, is to carefully hand-pick the fruit, and pack them gently in flour barrels, being careful not to bruise them in the least, either in filling the barrels or in handling them afterwards. In this way they will keep in cool cellars that are tolerably dry, when in the same cellars, they would probably shrivel on open shelves. Where the fruit is subject to the depredations of the apple moth, or to fungoid diseases, this plan is liable to objections, as the injured fruit will decay, and is difficult to get at inside the barrels; and if not taken out in time, a considerable portion of the fruit will be destroyed by the heat evolved in putrefaction. The English fruit rooms, which are mostly constructed more with an eye to perfect fruit preserving and ripening, than to economy of arrangement, however, are usually made expressly for fruit, and all gardens of any pretensions, have the fruit-room as regularly as the tool-shed. They are usually built on the north side of a wall, or other buildings, in order to secure a regular temperature. The walls are thick to ensure against frost penetrating them, and many of them have a roof of straw thatch which tends still more to keep out frost, and a regular natural temperature inside—along all four sides of the building are tiers of shelves, arranged one above another, like the sleeping-berths of a ship, and on these boards are spread the fruit in thin layers—usually but one course thick. Some of them have ventilation provided both from below and above; but those we have seen were not thus arranged, and there were no means of communication with the external air, beyond what the doors and windows afforded. In these rooms, apples and pears kept perfectly, ripening in succession, according to their season, and some of them keeping till apples and pears came again.

The secret of their success undoubtedly is the keeping up of a natural temperature of between 40° and 50°.

In our climate, this arrangement would not answer. The severity of the winters demand more protection from a low temperature than the strongest walls would alone afford. Where a dry gravelly bank is at command, a room could be constructed, part beneath the surface, and part above—the exposed part covered with the earth thrown out from below; which would make a fruit-room to perfection.

After all, the keeping of fruit on a large scale is not within the wants of most of our readers, who have but a few bushels, and in whose eyes a special fruit-house would not be warranted by the small quantity to be kept. There is then no alternative, but to make the best use of the facilities cellars, rooms, or out-buildings afford; and for this, barrels, boxes, cupboards and enclosed cases must be called into requisition; being careful to ensure a temperature of about 40° to 50°, not too damp or dry, and if somewhat dark, the better.—*Gardener's Monthly.*

For the New England Farmer.

AGRICULTURE IN COMMON SCHOOLS.

Mr. Editor:—I propose to offer a few more reasons, to show that practical and scientific agriculture cannot be successfully taught in our common schools. Perhaps this has been made sufficiently evident already, without any additional reasons. But I propose to pursue the subject a little further, and roll the car of reason along the plain and smooth track of common sense, in order to make "More Anon," who manifests a disposition to tread on the sore toes of others, "Clear the track when the bell rings."

But to the point at issue: It is a sufficient answer to all that *has* been said, and to all that *can* be said, in favor of introducing the study of agriculture into our schools, to say, that our common school-teachers are not qualified to teach it. They have not the requisite knowledge. And it is no disgrace or dishonor to them to acknowledge the fact, because it would be unreasonable to require them to teach what they do not understand, and what ought never to be taught in our common schools. They ought not to be required to teach agriculture, because it would be requiring them to teach more than they know, and more than they have ever had the means of knowing, and what is foreign to the particular purposes of common school education. Not one in a thousand is competent to teach it, and all who attempt it, will utterly fail in the attempt. The fact is, the science of agriculture is not understood by school-teachers, and consequently they cannot teach it. It has a length, and breadth, and depth, beyond their utmost capacities. It requires a master's skill—a professor's knowledge—to fathom and unravel its mysteries, and teach it practically and scientifically. But it should be remembered, that a large proportion of teachers, both in summer and winter, are young and delicate females, who would make sorry work in teaching the science and practice of agriculture. Their instruction would be very much like that of the jabbering monkey in the cheese-room, who undertook to teach by example the best method of curing cheeses and keeping them from moulding; and probably they would not be any more successful or entertaining in their instruction than the monkey was. It is in vain to tell me, that scientific and practical agriculture can be successfully taught by young and delicate females. It cannot be done, and it ought not to be required of them. The employment is inconsistent with the dignity and simplicity of the female character, and with the modesty and delicacy of the sex.

Again, it is a sufficient answer to all that *has* been said, and to all that *can* be said, in favor of introducing the study of agriculture into our common schools, to say, that the children are quite too small, too young and too ignorant to understand it. And yet "More Anon" would like to have all the teachers stand with the great pitcher of agricultural knowledge in hand, and endeavor to pour it into the infant minds of these little children, who have not the capacity to receive it. He will not wait to have their capacities developed, and their minds prepared for it by previous study. No; he would have this knowledge poured into the minds of these children, while they are yet in the common schools. Whether they be males or females; whether they understand the full force and meaning of language, or not; no matter how deficient they may be in any of the common branches of a common school education; and no matter what is to be their future occupation or pursuit; they must all study agriculture, in order to please "More Anon." Now, as it is always best for scholars to learn their A, B, C's, before they attempt to learn to read, so it is always best to learn those preparatory studies which are essential to the understanding of any particular branch of science, before entering upon that study. The opposite course would be reversing the order of nature, and "putting the cart before the horse."

In fine, it is a sufficient answer to all that *has* been said, and to all that *can* be said, in favor of introducing the study of agriculture into our common schools, to say, that the people of New England will never permit it to be done. They have a vote and a voice in this matter, and they will be heard; and their influence will be felt. They are too wise and enlightened, and understand their own interests and the interests of their children too well, to allow of their being cheated out of their common school education. They understand the nature, design and operation of common schools too well to suffer them to be perverted to other purposes than those for which they were originally established—the education of all children alike in the common branches of common school instruction. No man nor body of men will ever be able to persuade, or to drive them from this position which they have taken from clear convictions of truth and duty. In their minds, truth and falsehood are so well defined, and the character of each so plainly traced, and so well understood, as to be beyond the power of any man to confound or obliterate.

John Goldsbury.

Warwick, Mass., 1862.

Grub in the Head of Sheep.—Dr. Dadd, in a communication to the *Prairie Farmer*, says the only way to prevent grub in the head of sheep, is to put plenty of wholesome "grub" into the stomach of the animal—and that it is a well known fact, that sheep properly attended to, *well fed* and housed, are never troubled with the parasite known as the grub.

CROSS PLOWING. .

Opinions differ in regard to the expediency of cross plowing sward lands,—some contending that where the sward is comparatively light, such as is often found on old pastures or fields that have been long run out, cross plowing assists in the after culture of the crop to a much greater extent than the cost of the cross plowing. We have thought this to be true in our own practice on such lands. But there is another point to be considered, especially when heavy sward lands are to be wrought. We will state some of the reasons that occur to us.

Unfermented vegetable and animal matters, when buried in the soil as aliment for crops, ought not to be exposed to the action of the sun and winds until they have completely decomposed. The gaseous products eliminated by stable manure and other decomposable products, while in a fermenting state, always ascend, because they are specifically lighter than atmospheric air. They consequently enrich the soil by which, if properly inhumed, they are fixed, and thus contribute to the sustenance and support of plants. If fermentation takes place on the surface, as we think it will, in some degree, under favorable circumstances, the gaseous products will be diffused and lost. The quantity of actually soluble matter contained in an acre of well set sward land is much more considerable than many would imagine.

An English writer has ascertained that a vigorous sward, inverted in the latter part of summer, after the hay has been cut, or in the spring, before the grass has attained much growth, contains not less than *thirty tons of vegetable matter* to the acre! This, when resolved to *humus* by a well graduated decomposition, will afford a highly salutary aliment to vegetation, and if permitted to decompose *beneath* the soil, will essentially contribute to its productiveness. We make these remarks, bearing in mind all the time that decomposition is comparatively slow on the surface, and, also, the doctrine and practice, of some English farmers and writers, that nothing is lost in *surface manuring*. In that climate there may not be. In ours, under the scorching suns that occur even in May and September, we firmly believe it would be considerable.

When, for the sake of a more thorough tilth, it is thought advisable to cross plow land, the first plowing should be deep, and the second, or cross plowing, shallow, in order that the pulverization, which is the object sought in the latter plowing, may be secured without disturbing the mass of vegetable matter turned down by the first. If the second plowing be as deep as the first, the furrow slice, or sward, will be cut, and brought to the surface, greatly to the annoyance of the workmen, and perhaps, to the soil and crop. In pulverizing the surface of recently plowed green sward lands, the cultivator, or horse hoe, is far preferable to the plow. It pulverizes thoroughly as far as its teeth penetrate, and does not go so far below the surface as to to disturb the sods.

It is the practice in some sections of New England to plow the grass land intended for corn the next year, soon after the hay crop has been removed in July or August, allowing a few days for a new crop of leaves to start out after the grass is cut. It is thought by some with whom we have conversed, that this practice is an excellent one, though no reasons were given besides the one that the corn crop was *much better* than when the land was plowed late in the fall, or in the spring. If such is the fact, it will not be difficult to assign a reason or reasons for it.

For the New England Farmer.

ARE APPLE ORCHARDS PROFITABLE ON ARABLE LAND?

MR. EDITOR:—A few years ago, when the fruit-tree growing fever was raging at its highest pitch, when men got rich on unhatched chickens, and when one of my neighbors estimated his peach nursery at $1700 in a wakeful dream, I went a journey into the State of Maine, laboring somewhat under the same malady in a mild form, to visit a friend who was a practical farmer, and the owner of an apple orchard. On looking about on his and his neighbor's orchards, I saw but a few grafted trees. I said, "Mr. G., why do you not graft your trees and raise fruit for the market?" I never shall forget the expression of his countenance as he replied to my question. "Why," he said, "it would be all lost labor, and that their markets were already glutted with good apples, and that cider would not pay for making." His remarks made so strong an impression upon my mind that my visions of getting rich by raising apples for the market began to vanish, till my mind, I am in hopes, was restored to a sound state.

My neighbor, stated above, who valued his peach nursery at $1700, never realized 17 cents for his imaginary, inflated riches, and many other air-castles shared the same fate. As I have travelled over the counties of Essex and Middlesex of late, I have observed that much of the best soil was "devoted" to apple orchards, and (I believe in a true sense of the word "devoted,") many of them had hardly arrived to a producing state, and thousands, if not tens of thousands, of unproductive nurslings are occupying some of the best soil in the State, to what result the revelations of the future must decide. Raising apples for the market in the vicinity of our seaboard cities, undoubtedly, will be a profitable business; the privilege of shipping and sending them to foreign markets will reduce the quantity some, but, in a plentiful season, all our market towns consume but a pittance of the quantity grown. I have conversed with some of the owners of the finest orchards in the county, (one of them living within a rifle shot of Lowell,) who told me that their apples did not pay the labor of picking and carrying to market

in their bearing season, which, as it so happens, are the even years of late, while on the odd years these same orchards did not produce enough for family use.

Now the question is, in what manner can these surplus apples be disposed of to best advantage to indemnify the farmer? All farmers know that cattle, horses and swine are extremely fond of apples, but will it pay the way to appropriate our best soil to raise apples for them? As cider sells, would it not pay better to make some of them into cider for vinegar, if for no other purpose; cider is a much more wholesome beverage than the factitious wines so much used, and as long as people will have something stronger than cold water, would it not be a good substitute for those alluring counterfeit compounds, called wines. As a medicine I am practically convinced that cider is preferable to wine, so far as I have seen it used in the latter stages of protracted fevers.

Apples are of more value than all other fruits combined. The pear, the peach, the smaller fruits, and the foreign fruits, hastily decay, and the apple is the only fruit, except the dried varieties, which will keep the year around. The war against nature, of attempting to change the producing season by destroying the blossom, is a task that few farmers are able or willing to undertake; fighting against God is a poor and unprofitable warfare, and is more hopeless than fighting against rebels.

I have regretted, sometimes, on seeing farmers select their best arable soils for an orchard, when their neglected crevices between rocks and ledges would have been much more appropriate to the production of good apples. Apple trees grow and bear best upon an elevated, rocky soil—such a soil has not generally been worn out by constant cultivation and fleecing—and are much less subject to injury by frosts and insect depredators, than apple trees which grow on level plain lands. I have an impression that good arable land would be more remunerative to the farmer to raise grass, roots and grain crops upon, that produce every year, than the capricious apple and other fruit trees that are under the control of the evil influences of frost, curculios and other fruit depredators, which make their producing season uncertain sometimes and far between.

As far as my observation extends, the level plain lands are less productive than the high, mountainous, rocky swells. This present season I have observed, on travelling the road, that the apple trees on low ground and sandy plains produced very sparingly, but advancing upon the rising, rocky highlands, the trees were burdened with fruit. Now the question is fairly opened to discussion, are apple orchards more profitable on good arable land than the same land used for some other useful and necessary productions?

SILAS BROWN.

North Wilmington, Nov. 25, 1862.

DON'T EAT TOO MUCH.—The celebrated Abernethy once remarked to a friend: "I tell you honestly what I think is the whole cause of the complicated maladies of the human frame; it is their germandizing and stuffing and stimulating the digestive organs to excess; thereby creating irritation. The state of our minds is another cause—the fidgeting and discontenting ourselves about what cannot be helped—passions of all kinds; malignant passions, and worldly cares pressing upon the mind, disturb the central action, and do a great deal of harm."

FACTS ABOUT APPLES.

We have an old apple tree which was revived by trimming and grafting it with Baldwin scions fourteen years ago. It had been greatly neglected, and was fast running to ruin when the work of renovation was commenced. The trimming and grafting procees was not done at once, but judiciously continued through three years. During this time the sward was dug up and pulverized, and the soil for a diameter of twenty feet about the tree was manured and dressed two or three times with wood ashes. The manure was slightly dug in when applied. The new grafts began to bear, moderately, the third year, and gradually increased, until in 1860 they gave us *seventeen* barrels of apples. In 1861, they yielded only a peck or two, and the present year, 1862, *twenty-one* barrels, most of which were medium-sized, marketable apples! Another tree, which had scarcely a sound limb upon it, was renovated at the same time. This, however, produced the *Hunt Russet* apple, and did not need grafting. The dead wood was cut away, the top thinned a little, and a mound of good soil raised a foot in height about the trunk. The ground under the branches was dressed with ashes and old composts, about every other year for six years. The tree commenced bearing the summer succeeding the care bestowed upon it, and has averaged about two barrels per year since. These apples were especially valuable, as it was the *only tree on the place that furnished any fit for family use.* By considerable pleasant care, and a moderate expense, we have been enabled to gather this year about one hundred and twenty-five barrels of very fine apples.

In connection with the above, the Farmington, (Me.) *Chronicle* says:

The most important of all fruits that can be produced in temperate climates, if not the most important fruit which the Creator has bestowed upon man, is the apple. Were people generally in possession of information which would enable them to form conclusions in relation to the value of a single apple tree, no one who has a spot of terra firma large enough for a house lot, would neglect to plant one.

Hayward speaks of an apple tree in Duxbury, Mass., which was upwards of 100 years old, was 16 feet in circumference eight inches above the ground, and which produced in one year fruit from which 10 barrels of cider were made, besides 30 bushels of apples for the cellar.

An apple tree in Natick, Mass., was grafted to the Porter apple when 75 years old, and the 7th year from grafting produced 15 barrels which sold for 30 dollars.

The original Hurlbut apple tree produced 40 bushels in one year, and 20 the next.

The original Bars apple tree produced 60 in one year.

In Orange, N. J., a Harrison apple tree produced 100 bushels in one year.

An apple tree in Farmington, Me., produced 16 bushels the 16th year from the planting of the seed.

Cole says he has had fruit from an apple tree in Plymouth, Mass., when the tree was 200 years old.

An apple tree brought from England and planted near Hartford, Ct., produced fruit when 209 years old.

Several apple trees in the United States have trunks 12 feet in circumference.

EXTRACTS AND REPLIES.

A NEW GRAPE.

In the *Farmer* of Nov. 8 you say, "we have no good out-door grapes yet that are sufficiently hardy to stand the changes of our winters;" we think we have a grape in progress—a grape for the million—a grape to climb around the poor man's cottage as well as on the rich man's arbor. George Curtis, of the United Society, in New Lebanon, has the honor of originating this grape, which is now cultivated in preference to all other varieties in that village. This grape, which he calls the "Aromatic," appears to be as hardy as the oak, is a heavy bearer, and certainly a delicious fruit. An excellent quality in them is that they commence ripening early in September, and continue until frost. They are a valuable keeping grape. We are not sure that they have been disseminated beyond that village as yet, their appreciation of it requiring many vines. It will probably be brought before the public in due time.

Nov. 10, 1862. W. BACON.

WARM FEET IN COLD WEATHER.

Thinking some of the readers of the *Farmer* may be troubled to keep their feet warm in our cold climate, I propose to tell them how I care for mine.

I have my winter boots made one size too large for my feet. I then have a pair of slippers made of sheepskin, tanned with the wool on, or a little of it. One taken off soon after the sheep are sheared will have a sufficient length of wool, (and such can be obtained at almost any tannery.) It is necessary to have the slipper an exact fit for the foot over the stocking, or it will wrinkle when the boot is drawn over it. They can be made of calf skin, tanned with the hair on, but I think wool is warmer, and the advantage of this plan over a lined boot is, that the slipper which will generally be left in the boot when it is taken off, can be pulled out and dried every night, and the boot will be in much better condition than if it was lined. You can make a cut from the accompanying drawing and print it with this article; any one who sees it could cut his own if he wished to. In making, the edges should be sewed with what is called the ball stitch, as that leaves the seam soft as any other part, and it may be left open on the instep far enough so that it can be put on with ease, and will not need lacing up after it is on.

MILK FOR BUTTER.

I know, from actual experiment, that five quarts of good milk, when the milk-room can be kept at the proper temperature, will make a pound of butter.

HOW I BURN KEROSENE OIL IN A FLUID LAMP IN MY LANTERN.

The only secret is to have the wick very loose. I use common candle wicking, and have it so loose that a slight blow of the lantern would jar the wick down—and to prevent that I pinched in the tubes a little near the lower end. It is better not to fill the lamp more than half full of oil—then, by keeping the wick about level with the end of the tube, you will get a clear, steady flame. It requires the least trimming of any lamp I ever used. When once properly adjusted, it will burn three hours, every night for a week, without picking up or trimming. W. I. SIMONDS.

Roxbury, Vt., Nov., 1862.

REMARKS.—The pattern for cutting the slippers is very plain—but since the rebellion began, nearly all our women have learned to cut slippers with great correctness and ease.

—

GROWTH OF FOREST TREES.

I recently heard a distinguished farmer of Essex county say that his lands covered with young forest trees were more productive than those which he planted with corn or any other kind of grain. The same idea I remember to have heard put forth by the late Hon. Asa T. Newhall, of Lynnfield, who died leaving several hundred acres of woodland. Both of these gentlemen said they had watched the growth of their trees, and taken such measurement, from time to time, that they could tell how many cords of wood their lands increased annually, as well as the number of bushels of corn they gathered. If this be so, it opens a new field of culture; for nothing is more in demand than good wood, and nothing is more rapidly falling away from our markets. P.

December, 1862.

—

ELECTRICITY FOR PLANTS.

I have made an experiment with electricity in cultivation, the past season, and propose to give an account of my success, for the benefit of others who may choose to try it.

I made the experiment with some tomatoes, the seed of which was planted in boxes and kept in the sun, by a window, so as to obtain early plants.

In the meantime, I prepared the bed as beds for other vegetables are prepared; it was 12 by 6 feet, and I enclosed it with a wire which was buried about three inches below the surface of the ground, and from the middle of the ends of the bed another wire was attached to the buried wire, and this wire was held from the ground by some poles; one was three feet and the other four feet. At the corners of the bed, there were some sticks driven down to keep the buried wire in its place, the wire on the longest sides of the bed lying due North and South.

When the plants had attained the size for transplanting, I set a row in the bed, and at the same time another row in another bed, prepared in the same way, with the exception of the wires,

and as the plants in the boxes continued to come up and grow, I set more into the bed with the wires, and watched the result, which was most flattering; the vines in the electric bed were, at least, two-thirds larger than the others, and filled with tomatoes from the bottom to the top.

There were some cucumbers in the bed, and although perceptible, the result was not so marked; I consider the experiment a success. The electricity helps to disseminate the substance in the soil, and it may also help from the atmosphere.

The idea of the experiment is not original with me, and I hope that others may try it.

I will add a sketch of the wires, sticks, &c., as it will help to illustrate the theory. D. B. P.

Scituate, Dec. 1, 1862.

REMARKS.—We thank our correspondent for his interesting experiment, but cannot give his illustration short of an engraving. We hope others will communicate to us freely of such matters as they think will be useful.

"Train up a child in the way he should go, and when he is old he will not depart from it."

While our friends Goldsbury and Bacon are disputing about what can or cannot be taught in our common schools, may we not derive instruction from the contemplation of the sentiment we have selected. It is neither more or less than this: Let boys be taught when young, what they will have occasion to practice in after life. It is no argument to say that schools are not properly furnished with agricultural implements to pursue the science of agriculture to advantage, because they should be furnished with everything necessary for the benefit of the pupils. It will cost no more to provide plows and shovels, than dictionaries and grammars; the one are the tools of the farmer's trade, the other of the scholar's. In New England full one-half of the boys that grow up are directly interested in the culture of the soil; therefore they should be taught how to cultivate it.

Nov. 29, 1862. P.

HOW TO MAKE A LEMON TREE BEAR.

Having a lemon tree six or seven years old, I wish to know what I shall do to make it bear fruit? Please answer through the *Farmer*.

Bristol Co., Nov. 14, 1862. GEO., JR.

REMARKS.—We do not know. Will some one who does, inform our friend?

For the New England Farmer.

OLD APPLE ORCHARDS.

MR. EDITOR:—There is much said and written about the management of apple trees at this time, and much that is erroneous to my mind. One of your correspondents recommends using a Michigan plow with a strong team to tear the soil to pieces; that is the last thing I should do, especially for an orchard that has commenced bearing.

Now, let me tell my experience. I have had two farms with two old orchards where the trees were on the decline. One of them I plowed and trimmed off the old and decayed branches, and left the young sprouts to grow, and in the course of six years I had some quite thrifty trees. On the last farm, I have adopted another course,—that is, I have put in hogs through the spring, summer and fall, and I find a saving in expense in keeping, and the advantage to my trees, far greater than any thing I could do with the plow. They not only dig round the roots of the trees, but eat the apples that drop, and destroy the worms. I have had eight—four old hogs and four pigs—in my orchard this season, and am satisfied that the refuse apples are worth more for them than they are paying for cider apples.

JONATHAN BARTLETT.

Northboro', Nov. 29, 1862.

LADIES' DEPARTMENT.

POWER OF THE WILL.

Children often rise in the morning in anything but an amiable frame of mind. Petulent, impatient, quarrelsome, they cannot be spoken to or touched without producing an explosion of ill-nature. Sleep seems to have been a bath of vinegar to them, and one would think the fluid had invaded their mouth and nose and eyes and ears, and had been absorbed by every pore of their sensitive skins. In a condition like this, I have seen them bent over the parental knee and their persons subjected to blows from the parental palm; and they have emerged from the infliction with the vinegar all expelled, and their faces shining like the morning—the transition complete and satisfactory to all the parties. Three-quarters of the moods that men and women find themselves in are just as much under the control of the will as this. The man who rises in the morning, with his feelings all bristling like the quills of a hedgehog, simply needs to be knocked down. Like a solution of certain salts, he requires a rap to make him crystallize. A great many mean things are done in the family for which moods are put forward as the excuse, when the moods themselves are the most inexcusable things of all. A man or a woman in tolerable health has no moral right to indulge in an unpleasant mood, or to depend upon moods for the performance of the duties of life. If a bad mood come to such persons as these, it is to be shaken off by a direct effort of the will, under all circumstances.—*Timothy Titcomb's Lessons in Life.*

ROMPING.—Don't be afraid of a little romping on the part of your girls, and never punish them for indulging in it, but thank Heaven, who has endowed them so largely with animal spirits. These must have vent in some way, and better the glow which a little romping imparts to the cheeks than a distorted spine or a pallid brow. Health is one of the greatest of blessings, and only a good share of physical exercise can secure this to children. Let them romp, then, even if they do make some noise and tear their dresses occasionally, and lead you to cry out, "O dear! what shall I do?" Yes, let them romp. Sober times will come by and by. Life brings its cares soon enough to all; and let the children be happy while they are young. God made them to be happy, and why should parents thwart his plans? We do not believe in a dull childhood, but in cheerfulness in age.—*Home Journal.*

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REDUCTION IN SIZE.

As we intimated in the December number, we send out the *Farmer*, this month, somewhat reduced in thickness. We have made no change in the size or style of the page, so that the volume when completed and bound will be as nearly uniform with former volumes as possible. This change is rendered necessary by the large advance in the price of paper, which, though it may not be sustained for many months at its present high figure, will in all probability cost us during the entire year an advance of fifty per cent. on last year's price. We make as little change as possible in the appearance of our magazine, and shall restore it to its old size at the earliest moment we can do so without actual loss.

☞ The government is now daily feeding in the city of New Orleans more than 32,000 whites, 17,000 of whom are British subjects, and mostly claiming British protection. Of all this vast number of poor, only about one thousand are native Americans—the rest are made up of the several nationalities represented here from all parts of the globe. Beside all this drain upon the generosity of the government, there are 10,000 negroes to feed.

CATTLE MARKETS FOR DECEMBER.

The following is a summary of the reports for the four weeks ending December 18, 1862:

NUMBER AT MARKET.

	Cattle.	*Sheep and Lambs.*	*Shotes and Pigs.*	*Live Fat Hogs.*
November 26....	923	2153	400	1800
December 4....	2332	4802	300	2600
" 11....	3173	4420	350	2000
" 18....	2717	4184	200	2000
"				
Total....	9,145	15,559	1250	8,400

The following table shows the number of cattle and sheep from the several States, for the last four weeks:

	Cattle.	*Sheep.*
Maine	1497	3763
New Hampshire	1321	1105
Vermont	4496	5668
Massachusetts	273	444
Northern New York	392	577
Canada	361	3564
Western States	805	438
Total, last four weeks	9.145	15,359
Corresponding four weeks, last year.	7,767	13,231

PRICES.

	Nov. 26.	*Dec.* 4.	*Dec.* 11.	*Dec.* 18.
Beef, ₩ lb	3¾@6¾	4 @7	4 @7	4½@7½
Sheep and lambs	$2 @4½	$3 @5	$3 @5½	$2 @5½
Swine, stores, wh'le	4 @4½	4 @6	4 @5	4 @5½
" " retail	4 @6	4½@6½	5 @6½	4½@6½
Fat hogs, live weight	4 @5	4 @5	5 @	5 @

REMARKS.—During these four weeks there have been at market 1378 cattle and 2328 sheep more than there were last year for the four corresponding weeks. At the same time the number of Western cattle and sheep is much smaller this year than last. Last year we reported 1702 Western cattle and 2328 sheep, and this year only 805 cattle and 438 sheep are put down as coming from Albany. This deficiency has been well supplied this year by Northern and Eastern oxen; thus distributing among the farmers of New England probably over seventy thousand dollars of the sum which was paid out last year for Western stock.

The proportion of oxen has been unusually large during the month, and that of store and small beef cattle much smaller than it was in October.

The supply of choice extra beef has been small, while that of the second and third qualities of beef has been too large for the market, and some cattle have remained unsold at the close of the last two markets. Consequently there has been a greater advance on extra beef than on the ordinary qualities. Two year-olds, &c., have improved more than common oxen, for which the market has been quite dull for the last two weeks.

For some time past most of the sheep which are brought to market, are engaged to certain butchers before their arrival. Consequently there has been but little seen or heard of the sale of sheep. From 4½ to 5¾c ₩ lb., has been the range of fair and good sheep; a few large and fat at 6c. Comparatively few however have as yet been sold by the pound, most being taken at so much per head. The variation of the figures in our scale of prices for sheep indicates rather the change in quality than in price. Prices have been pretty uniform during the month, while the quality has varied much. At the last market there was a lot of 200 "pelters" from Canada, which sold for $2 per head or less; while the two previous weeks we heard of no lots being sold under $3.

Working oxen have been plenty during the month, and have been sold at about their value for the shambles.

Milch cows have been in fair demand, and prices remain about the same as heretofore. Cows and young calves from $25 to $35—inferior ones have sold for less, and those warranted superior for more. The average value of cows may be illustrated perhaps by a sale outside of the market. In one of the towns in the vicinity of Boston, the stock of a milk-farm was recently sold, among which were 65 cows, which were sold, at auction, at an average price of $28 per head. The stock was regarded as a very good selection.

Hides, 8c ₩ lb. Tallow 8c. Calf skins, 12½c. Pelts $1,75 to $2,00.